

Appendix A

**Feasibility Study Supplement Report Release Site Waste
Classifications**

Appendix A

Feasibility Study Supplement Release Site Waste Classifications

Table A-1. Contaminant and media type information used for the development of the Operable Unit 3-13 Feasibility Study Supplement Report on-site and off-site cost estimates.

Release Site	Contamination and Media Type
TSF-06	Soil contaminated with radionuclides and potentially characteristic for Hg
TSF-07	Soil contaminated with radionuclides and potentially characteristic for Cr, Pb, Hg, Se, and Ag
TSF-08	Contaminated soil that is potentially characteristic for Hg
TSF-09/18	Soil contaminated with radionuclide and having listed waste for organics and potential PCB issues
TSF-21	Concrete debris contaminated with radionuclides and having listed waste for organics issues
TSF-26	Soil contaminated with radionuclides and having listed waste for organics issues
CPP-01/04/05	Soil contaminated with radionuclides
CPP-03	Soil contaminated with radionuclides
CPP-08/09	Soil contaminated with radionuclides
CPP-10	Soil contaminated with radionuclides
CPP-11	Soil contaminated with radionuclides
CPP-13	Soil contaminated with radionuclides and having listed waste issues
CPP-14	Soil contaminated with radionuclides and potentially characteristic for Hg and Pb along with PCB issues
CPP-19	Soil contaminated with radionuclides
CPP-34	Soil contaminated with radionuclides and potentially characteristic for Pb and listed waste issues
CPP-35	Soil contaminated with radionuclides and potentially characteristic for Hg and listed waste issues
CPP-36/91	Soil contaminated with radionuclides and potentially characteristic for Hg and listed waste issues
CPP-44	Contaminated soil that is potentially characteristic for Cr, Pb, and Hg
CPP-55	Contaminated soil that is potentially characteristic for Hg
CPP-67	Soil contaminated with radionuclides and potentially characteristic for RCRA metals and potential listed waste issues
CPP-69	Concrete debris contaminated with radionuclides and potentially characteristic for RCRA metals and organics

Table A-1. (continued).

Release Site	Contamination and Media Type
CPP-92	Soil contaminated with radionuclides and having listed waste issues
CPP-93	Contaminated soil that is potentially characteristic for Hg
CPP-94	Contaminated soil (86%) and debris (14%) having hazardous constituents (HF)
CFA-04	Soil contaminated with radionuclides and potentially characteristic for Hg
CFA-08	Soil contaminated with radionuclides and having PCB issues
CFA-10	Contaminated soil that is potentially characteristic for Cr and Hg along with PCBs
CFA-12	Soil contaminated with radionuclides
ARA-12	Soil contaminated with radionuclides and potentially characteristic for Cr and Pb
ARA-23	Soil contaminated with radionuclides
OU 10-02	Soil contaminated with radionuclides
BORAX-01	Soil contaminated with radionuclides and having potential RCRA metal issues
LCCDA-01	Soil contaminated with radionuclides and potentially characteristic for acids
LCCDA-02	Soil contaminated with radionuclides and potentially characteristic for acids
WAG 1 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 2 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 3 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 4 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 5 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 6 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 7 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model
WAG 10 D&D&D	Contaminated debris with classification of waste streams based on the D&D&D parametric model

Appendix B

Feasibility Study Supplement Report

Release Site Waste Volumes

Appendix B

Feasibility Study Supplement Report Release Site Waste Volumes

Table B-1. Release site waste volumes used for development of the Operable Unit 3-13 Feasibility Study Supplement Report on-site and off-site cost estimates.

Release Site	Volume (yd ³)	Volume LLW Soils (yd ³)	Volume MLLW Soils (yd ³)	Volume Hazardous Waste Soils (yd ³)	Volume LLW Debris (yd ³)	Volume MLLW Debris (yd ³)	Volume Hazardous Waste Debris (yd ³)
TSF-06	5,000	—	5,000	—	—	—	—
TSF-07	62,326	—	62,326	—	—	—	—
TSF-08	150	—	—	150	—	—	—
TSF-09/18	1,500	—	1,500	—	—	—	—
TSF-21	30	—	—	—	—	30	—
TSF-26	5,100	—	5,100	—	—	—	—
CPP-01/04/05	3,664	3,664	—	—	—	—	—
CPP-03	568	568	—	—	—	—	—
CPP-08/09	3,886	3,886	—	—	—	—	—
CPP-10	2,301	2,301	—	—	—	—	—
CPP-11	916	916	—	—	—	—	—
CPP-13	1,791	—	1,791	—	—	—	—
CPP-14	137	—	137	—	—	—	—
CPP-19	3,496	3,496	—	—	—	—	—
CPP-34	19,183	—	19,183	—	—	—	—
CPP-35	2,711	—	2,711	—	—	—	—
CPP-36/91	6,540	—	6,540	—	—	—	—
CPP-44	89	—	—	89	—	—	—
CPP-55	370	—	—	370	—	—	—
CPP-67	33,168	—	33,168	—	—	—	—
CPP-69	59	—	—	—	—	59	—
CPP-92	2,943	—	2,943	—	—	—	—
CPP-93	654	—	—	654	—	—	—
CPP-94	9	—	—	8	—	—	1

Table B-1. (continued).

Release Site	Volume (yd ³)	Volume LLW Soils (yd ³)	Volume MLLW Soils (yd ³)	Volume Hazardous Waste Soils (yd ³)	Volume LLW Debris (yd ³)	Volume MLLW Debris (yd ³)	Volume Hazardous Waste Debris (yd ³)
CFA-04	8,227	—	8,227	—	—	—	—
CFA-08	73,771	—	73,771	—	—	—	—
CFA-10	161	—	—	161	—	—	—
CFA-12	55	55	—	—	—	—	—
ARA-12	103	—	103	—	—	—	—
ARA-23	55,705	55,705	—	—	—	—	—
OU 10-02	1,308	1,308	—	—	—	—	—
BORAX-01	5	—	5	—	—	—	—
LCCDA-01	196	—	196	—	—	—	—
LCCDA-02	196	—	196	—	—	—	—
WAG 1 D&D&D	8,518	—	—	—	8,476	21	21
WAG 2 D&D&D	30,353	—	—	—	30,268	37	48
WAG 3 D&D&D	47,019	—	—	—	46,915	48	55
WAG 4 D&D&D	552	—	—	—	549	1	1
WAG 5 D&D&D	10,923	—	—	—	10,907	5	11
WAG 6 D&D&D	0	—	—	—	—	—	—
WAG 7 D&D&D	71,609	—	—	—	71,461	50	98
WAG 10 D&D&D	12	—	—	—	—	—	12
Total	465,307	71,898	222,900	1,432	168,577	252	247

— = No waste type at this location.

Appendix C
On-Site Disposal Cost Estimate

Appendix C

On-Site Disposal Cost Estimate

Table C-1. Current cost estimate for the onsite disposal at the ICDF Complex, including the four major cost elements along with the total estimated cost for on-site disposal.

Cost Element	Current Cost Estimate
Design/Construction/Startup Total	\$46,852,000
Operations Total	\$26,046,000
Closure Total	\$13,867,000
Post-Closure Total	\$9,212,000
 Grand Total	 \$95,977,000

Table C-2. Detailed cost estimate for on-site disposal at the ICDF Complex.

Item	Cost
ICDF Complex Project (Design/Build/Startup)	\$46,852,000
 ICDF Design	 \$8,010,000
ICDF Conceptual (10%) Design	\$684,000
ICDF Title I (30%) Design	\$1,262,000
ICDF Early Dig and Test Pad Design	\$541,000
ICDF 60% Design Components	\$1,500,000
ICDF Title II (90%) Design	\$3,820,000
Assess ICDF RD/CWP for construction of Cell 2	\$204,000
 SSSTF Design	 \$4,211,000
SSSTF Conceptual (10%) Design	\$942,000
SSSTF Title I (30%) Design	\$1,629,000
SSSTF Title II (90%) Design	\$1,338,000
Soils Stabilization Treatment Unit Design	\$303,000
 Remedial Action Work Plan (RA WP)	 \$917,000
ICDF Complex Remedial Action Work Plan (RA WP)	\$917,000
 ICDF Complex Startup (SSSTF and Cell 1)	 \$3,319,000
Develop ICDF Complex Waste Tracking System	\$221,000
Develop ICDF Complex O&M Manual	\$1,327,000
Develop DOE Order 435.1 Compliance Documents (crosswalk, PA, CA, Disposal Authorization Basis and Statement, etc.)	\$158,000
Personnel Training	\$119,000

Table C-2. (continued).

Startup Assessment	\$1,146,000
ICDF Complex Operation Prefinal Inspection	\$41,000
ICDF Construction Inspections (cell 1)	\$20,000
SSSTF Construction Inspections	\$20,000
ICDF Complex Remedial Action Report	\$267,000
ICDF Landfill Cell 2 Startup	\$651,000
Update ICDF Complex O&M Manual for Cell 2 Operations	\$68,000
Personnel Training	\$68,000
Startup Assessment (Cell 2)	\$344,000
ICDF Complex Operation Prefinal Inspection (Cell 2)	\$29,000
Remedial Action Report changes for Cell 2	\$143,000
ICDF Complex Fleet Equipment	\$2,278,000
ICDF Complex Construction	\$21,472,000
ICDF Early Dig and Test Pad Construction Activities	\$2,021,000
ICDF Cell 1 Construction (Phase II)	\$6,453,000
ICDF Construction (cell 2)	\$5,303,000
SSSTF Construction	\$5,228,000
ICDF Complex Groundwater Monitoring System	\$2,467,000
Program/Project Management	\$5,996,000
Program Management	\$950,000
Project Management	\$4,364,000
Construction Management	\$682,000
ICDF Complex Operations	\$26,046,000
Waste Characterization	\$6,940,000
Waste Stream QA/QC sampling and analysis	\$3,480,000
Waste Stream Profile acceptance	\$1,410,000
Post-Treatment Sampling and Analysis	\$2,050,000
Treatment and Disposal Operations	\$10,460,000
Waste Receipt Operations	\$2,177,000
Staging and Storage Operations	\$133,000
Soil Stabilization Treatment Operations	\$1,651,000
Debris Treatment by Microencapsulation Operations	\$1,337,000

Table C-2. (continued).

Landfill Operations	\$1,446,000
Evaporation Pond Operations	\$224,000
Decontamination Operations	\$287,000
Sizing Operations	\$288,000
Packaging and Off-Site Disposal Operations	\$788,000
Miscellaneous Access and Operational Activities	\$2,129,000
Records Management	\$1,676,000
Records Management	\$1,430,000
Records Storage and Audit Management	\$171,000
5 yr Review Support	\$76,000
Surveillance and Monitoring	\$4,156,000
Perched Water Monitoring	\$763,000
SRPA Monitoring	\$299,000
Leachate Monitoring	\$139,000
Institutional Controls	\$83,000
Container Storage Area Surveillances	\$320,000
Tank Storage Area Surveillances	\$664,000
Decontamination Facility	\$341,000
Treatment Unit Surveillances	\$308,000
Landfill Surveillances	\$234,000
Evaporation Pond Surveillances	\$292,000
Administrative Facility and Grounds	\$337,000
Fleet Equipment Surveillances	\$375,000
Maintenance	\$1,553,000
Fencing and Grounds	\$415,000
Administrative Facility	\$118,000
Equipment	\$294,000
Soil Stabilization Treatment System	\$153,000
Landfill	\$169,000
Evaporation Pond	\$189,000
Decontamination Facility	\$215,000
Reserved	\$0
Reserved	\$0
Reserved	\$0

Table C-2. (continued).

Reserved	\$0
Program/Project Management	\$1,260,000
Program Management	\$264,000
Project Management	\$995,000
Reserved	\$0
ICDF Complex Closure	\$13,867,000
Deactivation and Characterization	\$11,237,000
Deactivate ICDF Complex Structures	\$177,000
Update/Modify Remedial Design/Construction Work Plans	\$230,000
Engineered Barrier Construction	\$8,900,000
D&D of SSSTF	\$1,600,000
Disposal of Wastes from D&D Activities	\$330,000
Evaporation Pond Closure	\$1,001,000
Deactivate ICDF Evaporation Pond	\$30,000
Update/Modify Remedial Design/Construction Work Plans	\$115,000
D&D of Evaporation Pond	\$300,000
Disposal of Wastes from D&D Activities	\$555,000
Records Management	\$75,000
Records Management	\$45,000
Records Storage and Audit Management	\$15,000
5 yr Review Support	\$15,000
Surveillance and Monitoring	\$143,000
Reserved	\$0
SRPA Monitoring	\$60,000
Leachate Monitoring	\$23,000
Institutional Controls	\$17,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Evaporation Pond Surveillances	\$44,000
Reserved	\$0

Table C-2. (continued).

Reserved	\$0
Maintenance	\$51,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Landfill	\$13,000
Evaporation Pond	\$38,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Program/Project Management	\$1,361,000
Program Management	\$132,000
Project Management	\$579,000
Construction Management	\$650,000
ICDF Complex Post-Closure	\$9,212,000
Reserved	\$0
Reserved	\$0
Records Management	\$2,328,000
Records Management	\$1,133,000
Records Storage and Audit Management	\$588,000
5 yr Review Support	\$607,000
Surveillance and Monitoring	\$3,058,000
Reserved	\$0
SRPA Monitoring	\$2,393,000
Reserved	\$0

Table C-2. (continued).

Institutional Controls	\$666,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Maintenance	\$1,016,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Landfill	\$1,016,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Program/Project Management	\$2,810,000
Program Management	\$529,000
Project Management	\$2,281,000
Reserved	\$0

Appendix D

Feasibility Study Supplement Report

On-Site Disposal Cost Estimate

Appendix D

Feasibility Study Supplement Report On-Site Disposal Cost Estimate

Table D-1. Operable Unit 3-13 Feasibility Study Supplement Report summary cost estimate for on-site disposal at the ICDF Complex, including the four major cost elements along with the total estimated cost for on-site disposal.

Cost Element	Feasibility Study Supplement Cost Estimate (1998 dollars)
Design/Construction/Startup Total	\$62,796,000
Operations Total	\$49,057,000
Closure Total	\$91,626,000
Post-Closure Total	\$30,938,000
 Grand Total	 \$234,417,000

Table D-2. OU 3-13 FS Supplement Report cost estimate for on-site disposal at the ICDF Complex for on-site disposal.

Item	Cost
ICDF Complex Project (Design/Build/Startup)	\$62,796,000
 ICDF Design	 \$1,068,000
ICDF Conceptual (10%) Design	\$70,000
ICDF Title I (30%) Design	
ICDF Early Dig and Test Pad Design	
ICDF 60% Design Components	
ICDF Title II (90%) Design	\$998,000
Assess ICDF RD/CWP for construction of Cell 2	
 SSSTF Design	 \$0
SSSTF Conceptual (10%) Design	
SSSTF Title I (30%) Design	
SSSTF Title II (90%) Design	
Soils Stabilization Treatment Unit Design	
 Remedial Action Work Plan (RA WP)	 \$82,000
ICDF Complex Remedial Action Work Plan (RA WP)	\$82,000

Table D-2. (continued).

Item	Cost
ICDF Complex Startup (SSSTF and Cell 1)	\$170,000
Develop ICDF Complex Waste Tracking System	
Develop ICDF Complex O&M Manual	
Develop DOE Order 435.1 Compliance Documents (crosswalk, PA, CA, Disposal Authorization Basis and Statement, etc.)	
Personnel Training	\$98,000
Startup Assessment	
ICDF Complex Operation Prefinal Inspection	
ICDF Construction Inspections (cell 1)	\$10,000
SSSTF Construction Inspections	
ICDF Complex Remedial Action Report	\$62,000
ICDF Landfill Cell 2 Startup	\$0
Update ICDF Complex O&M Manual for Cell 2 Operations	
Personnel Training	
Startup Assessment (Cell 2)	
ICDF Complex Operation Prefinal Inspection (Cell 2)	
Remedial Action Report changes for Cell 2	
ICDF Complex Fleet Equipment	\$1,495,000
ICDF Complex Construction	\$48,197,000
ICDF Early Dig and Test Pad Construction Activities	\$2,918,000
ICDF Cell 1 Construction (Phase II)	\$25,326,000
ICDF Construction (cell 2)	
SSSTF Construction	\$17,565,000
ICDF Complex Groundwater Monitoring System	\$2,388,000
Program/Project Management	\$11,785,000
Program Management	\$220,000
Project Management	\$813,000
Construction Management	\$10,752,000
ICDF Complex Operations	\$49,057,000
Waste Characterization	\$8,634,000
Waste Characterization (QA/QC)	\$6,801,000
Hazardous Waste Determinations	\$1,833,000

Table D-2. (continued).

Item	Cost
Treatment and Disposal Operations	\$27,537,000
Treatment Operations	\$15,501,000
Disposal Operations	\$12,036,000
Records Management	\$4,388,000
Records Management	\$3,900,000
Records Storage and Audit Management	\$122,000
5 yr reviews	\$367,000
Surveillance and Monitoring	\$2,410,000
Perched Water Monitoring	\$1,189,000
SRPA Monitoring	\$732,000
Leachate Monitoring	\$405,000
Institutional Controls	\$83,000
Maintenance	\$216,000
Fencing and Grounds	\$216,000
Program/Project Management	\$5,872,000
Program Management	\$440,000
Project Management	\$1,611,000
Construction Management	\$3,821,000
ICDF Complex Closure	\$91,626,000
ICDF Complex D&D	\$74,321,000
Cap Construction	\$71,965,000
D&D of Transfer Area	\$2,356,000
Records Management	\$24,000
Records Management	
Records Storage and Audit Management	\$24,000
5 yr reviews	\$0
Surveillance and Monitoring	\$609,000
Perched Water Monitoring	\$146,000
SRPA Monitoring	\$146,000
Leachate Monitoring	\$299,000
Institutional Controls	\$17,000

Table D-2. (continued).

Item	Cost
Maintenance	\$43,000
Fencing and Grounds	\$43,000
Program/Project Management	\$16,629,000
Program Management	\$88,000
Project Management	\$547,000
Construction Management	\$15,994,000
ICDF Complex Post Closure	\$30,938,000
Records Management	\$4,553,000
Records Management	
Records Storage and Audit Management	\$1,071,000
5 yr reviews	\$3,483,000
Surveillance and Monitoring	\$7,548,000
Perched Water Monitoring	\$146,000
SRPA Monitoring	\$6,370,000
Leachate Monitoring	\$299,000
Institutional Controls	\$732,000
Maintenance	\$15,186,000
Fencing and Grounds	\$1,899,000
Cap Maintenance	\$13,287,000
Program/Project Management	\$3,651,000
Program Management	\$3,651,000
Project Management	
Construction Management	

Appendix E

Off-Site Disposal Cost Estimate

Appendix E

Off-Site Disposal Cost Estimate

Table E-1. Current cost estimate for the offsite treatment and disposal, including the four major cost elements along with the total estimated cost for offsite treatment and disposal.

Cost Element	Current Cost Estimate
Design/Construction/Startup Total	\$17,931,000
Operations Total	\$515,501,000
Closure Total	\$3,925,000
 Grand Total	 \$537,357,000

Table E-2. Current cost estimate for the onsite treatment and offsite disposal, including the four major cost elements along with the total estimated cost for offsite disposal.

Cost Element	Current Cost Estimate
Design/Construction/Startup Total	\$23,688,000
Operations Total	\$162,404,000
Closure Total	\$4,183,000
 Grand Total	 \$190,276,000

Table E-3. Detailed cost estimate for offsite treatment and disposal.

Item	Cost
Off-Site Treatment and Disposal (Design/Build/Startup)	\$17,931,000
 Reserved	 \$0
 Loadout Facility Design	 \$2,982,000
Loadout Facility Conceptual (10%) Design	\$800,000
Loadout Facility Title I (30%) Design	\$977,000
Loadout Facility Title II (90%) Design	\$1,204,000
 Remedial Action Work Plan (RA WP)	 \$550,000
Loadout Facility Remedial Action Work Plan (RA WP)	\$550,000
 Loadout Facility Startup	 \$1,813,000
Develop Loadout Facility Waste Tracking System	\$221,000
Develop Loadout Facility O&M Manual	\$663,000
Reserved	\$0

Table E-3. (continued).

Item	Cost
Personnel Training	\$71,000
Startup Assessment	\$687,000
Loadout Facility Operation Prefinal Inspection	\$24,000
Reserved	\$0
Loadout Facility Construction Inspections	\$12,000
Loadout Facility Remedial Action Report	\$134,000
Reserved	\$0
Loadout Facility Fleet Equipment	\$2,360,000
Loadout Facility Construction	\$7,229,000
Site Preparation	\$959,000
Utilities	\$1,090,000
Administrative Facility	\$250,000
Weigh Scale	\$150,000
Decontamination Facility	\$1,728,000
Concrete Loading/Unloading Pad	\$2,280,000
New Railroad spurline	\$772,000
Reseved	\$0
Reserved	\$0
Program/Project Management	\$2,998,000
Program Management	\$475,000
Project Management	\$2,182,000
Construction Management	\$341,000
Loadout Facility Operations	\$51,550,000
Waste Characterization	\$1,851,000
Waste Stream QA/QC sampling and analysis	\$1,710,000
Waste Stream Profile acceptance	\$141,000
Reserved	\$0
Treatment and Disposal Operations	\$49,101,000
Waste Receipt Operations	\$194,000
Staging and Storage Operations	\$13,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0

Table E-3. (continued).

Item	Cost
Decontamination Operations	\$29,000
Sizing Operations	\$29,000
Packaging and Off-Site Disposal Operations	\$48,623,000
Miscellaneous Access and Operational Activities	\$213,000
Records Management	\$143,000
Records Management	\$119,000
Records Storage and Audit Management	\$17,000
5 yr Review Support	\$8,000
Surveillance and Monitoring	\$212,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Institutional Controls	\$8,000
Container Storage Area Surveillances	\$32,000
Tank Storage Area Surveillances	\$66,000
Decontamination Facility	\$34,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Administrative Facility and Grounds	\$34,000
Fleet Equipment Surveillances	\$38,000
Maintenance	\$90,000
Fencing and Grounds	\$42,000
Administrative Facility	\$12,000
Equipment	\$15,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Decontamination Facility	\$22,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Program/Project Management	\$152,000
Program Management	\$26,000
Project Management	\$126,000
Construction Management	\$0

Table E-3. (continued).

Item	Cost
Loadout Facility Closure	\$3,925,000
Deactivation and Characterization	\$2,802,000
Deactivate Loadout Facility Structures	\$237,000
Update/Modify Remedial Design/Construction Work Plans	\$230,000
Reserved	\$0
D&D of Loadout Facility	\$1,800,000
Disposal of Wastes from D&D Activities	\$534,000
Reserved	\$0
Records Management	\$67,000
Records Management	\$37,000
Records Storage and Audit Management	\$15,000
5 yr Review Support	\$15,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Program/Project Management	\$1,057,000
Program Management	\$119,000
Project Management	\$513,000
Construction Management	\$425,000

Table E-4. Detailed cost estimate for onsite treatment and offsite disposal.

Item	Cost
Off-Site Disposal (Design/Build/Startup)	\$23,688,000
Reserved	\$0
Treatment and Loadout Facility Design	\$4,858,000
Treatment and Loadout Facility Conceptual (10%) Design	\$989,000

Table E-4. (continued).

Item	Cost
Treatment and Loadout Facility Title I (30%) Design	\$1,791,000
Treatment and Loadout Facility Title II (90%) Design	\$1,472,000
Soils Stabilization Treatment Unit Design	\$303,000
Aqueous Waste Treatment Unit Design	\$303,000
Remedial Action Work Plan (RA WP)	\$733,000
Treatment and Loadout Facility Remedial Action Work Plan (RA WP)	\$733,000
Treatment and Loadout Facility Startup	\$2,557,000
Develop Treatment and Loadout Facility Waste Tracking System	\$221,000
Develop Treatment and Loadout Facility O&M Manual	\$1,061,000
Reserved	\$0
Personnel Training	\$95,000
Startup Assessment	\$917,000
Treatment and Loadout Facility Operation Prefinal Inspection	\$33,000
Reserved	\$0
Treatment and Loadout Facility Construction Inspections	\$16,000
Treatment and Loadout Facility Remedial Action Report	\$214,000
Reserved	\$0
Treatment and Loadout Facility Fleet Equipment	\$2,375,000
Treatment and Loadout Facility Construction	\$8,369,000
Site Preparation	\$959,000
Utilities	\$1,090,000
Administrative Facility	\$250,000
Weigh Scale	\$150,000
Decontamination Facility	\$1,728,000
Concrete Loading/Unloading Pad	\$2,280,000
New Railroad spurline	\$772,000
Soils Stabilization Treatment Unit	\$1,004,000
Debris Waste Treatment Equipment	\$12,000
Aqueous Waste Treatment Unit	\$125,000
Reserved	\$0
Reserved	\$0
Program/Project Management	\$4,797,000
Program Management	\$760,000
Project Management	\$3,491,000
Construction Management	\$546,000

Table E-4. (continued).

Item	Cost
Treatment and Loadout Facility Operations	\$162,404,000
Waste Characterization	\$29,153,000
Waste Stream QA/QC sampling and analysis	\$17,102,000
Waste Stream Profile acceptance	\$1,410,000
Post-Treatment Sampling and Analysis (soils/aqueous waste)	\$4,222,000
Post-Treatment Shipping Container Analysis (debris)	\$6,419,000
Treatment and Disposal Operations	\$125,472,000
Waste Receipt Operations	\$1,943,000
Staging and Storage Operations	\$133,000
Soil Stabilization Treatment Operations	\$3,255,000
Debris Treatment by Microencapsulation Operations	\$4,409,000
Reserved	\$0
Aqueous Waste Treatment Unit Operations	\$1,172,000
Decontamination Operations	\$287,000
Sizing Operations	\$288,000
Packaging and Off-Site Disposal Operations	\$111,856,000
Miscellaneous Access and Operational Activities	\$2,129,000
Records Management	\$1,495,000
Records Management	\$1,249,000
Records Storage and Audit Management	\$171,000
5 yr Review Support	\$76,000
Surveillance and Monitoring	\$2,739,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Institutional Controls	\$83,000
Container Storage Area Surveillances	\$320,000
Tank Storage Area Surveillances	\$664,000
Decontamination Facility	\$341,000
Treatment Unit Surveillances	\$308,000
Reserved	\$0
Aqueous Waste Treatment Unit Surveillances	\$308,000
Administrative Facility and Grounds	\$337,000
Fleet Equipment Surveillances	\$375,000
Maintenance	\$1,230,000
Fencing and Grounds	\$415,000
Administrative Facility	\$118,000

Table E-4. (continued).

Item	Cost
Equipment	\$150,000
Soil Stabilization Treatment System	\$153,000
Reserved	\$0
Aqueous Waste Treatment Unit	\$178,000
Decontamination Facility	\$215,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0
Program/Project Management	\$2,317,000
Program Management	\$264,000
Project Management	\$2,053,000
Construction Management	\$0
Treatment and Loadout Facility Closure	\$4,183,000
Deactivation and Characterization	\$3,060,000
Deactivate Treatment and Loadout Facility Structures	\$295,000
Update/Modify Remedial Design/Construction Work Plans	\$230,000
Reserved	\$0
D&D of Treatment and Loadout Facility	\$2,000,000
Disposal of Wastes from D&D Activities	\$534,000
Reserved	\$0
Records Management	\$67,000
Records Management	\$37,000
Records Storage and Audit Management	\$15,000
5 yr Review Support	\$15,000
Reserved	\$0
Reserved	\$0
Reserved	\$0
Reserved	\$0

Table E-4. (continued).

Item	Cost
Reserved	\$0
Reserved	\$0
Program/Project Management	\$1,057,000
Program Management	\$119,000
Project Management	\$513,000
Construction Management	\$425,000

Appendix F

Feasibility Study Supplement Report
Off-Site Disposal Cost Estimate

Appendix F

Feasibility Study Supplement Report Off-Site Disposal Cost Estimate

Table F-1. Operable Unit 3-13 Feasibility Study Supplement Report summary cost estimate for off-site disposal, including the four major cost elements along with the total estimated cost for off-site disposal.

Cost Element	Feasibility Study Supplement Cost Estimate (1998 dollars)
Design/Construction/Startup Total	\$10,150,000
Operations Total	\$700,384,000
Closure Total	\$2,312,000
 Grand Total	 \$712,846,000

Table F-2. Operable Unit 3-13 Feasibility Study Supplement Report cost estimate for off-site disposal.

Item	Cost
Loadout Facility Project (Design/Build/Startup)	\$10,150,000
 Loadout Facility Design	 \$477,000
Loadout Facility Conceptual (10%) Design	\$70,000
Loadout Facility Title I (30%) Design	
Loadout Facility Title II (90%) Design	\$407,000
Soils Stabilization Treatment Unit Design	
 Remedial Action Work Plan (RA WP)	 \$261,000
Loadout Facility Remedial Action Work Plan (RA WP)	\$82,000
Packaging, Shipping, and Transportation Documents	\$179,000
 Loadout Facility Startup	 \$127,000
Develop Loadout Facility Waste Tracking System	
Develop Loadout Facility O&M Manual	
Develop DOE Order 435.1 Compliance Documents (crosswalk, PA, CA, Disposal Authorization Basis and Statement, etc.)	
Personnel Training	\$55,000
Startup Assessment	
Loadout Facility Operation Prefinal Inspection	
Loadout Facility Construction Inspections	\$10,000
Reserved	
Loadout Facility Remedial Action Report	\$62,000

Table F-2. (continued).

Item	Cost
Loadout Facility Fleet Equipment	\$0
Loadout Facility Construction	\$7,231,000
Loadout Facility Construction	\$7,231,000
Program/Project Management	\$2,054,000
Program Management	
Project Management	\$488,000
Construction Management	\$1,567,000
Loadout Facility Operations	\$700,384,000
Waste Characterization	\$8,634,000
Waste Characterization (QA/QC)	\$6,801,000
Hazardous Waste Determinations	\$1,833,000
Disposal Operations	\$564,069,000
Hazardous Waste Treatment and Disposal	\$2,552,000
Mixed Low-Level Waste Disposal	\$207,428,000
Low-Level Waste Disposal	\$348,131,000
Decontamination Activities	\$5,957,000
Records Management	\$6,338,000
Records Storage and Documentation	\$6,338,000
Maintenance	\$3,067,000
Loadout Facility Maintenance	\$3,067,000
Program/Project Management	\$118,276,000
Program Management	
Project Management	\$2,009,000
Construction Management	\$116,267,000
Loadout Facility Closure	\$2,312,000

Table F-2. (continued).

Item	Cost
Loadout Facility D&D	\$1,594,000
D&D of Transfer Area	\$1,594,000
Program/Project Management	\$718,000
Program Management	
Project Management	\$286,000
Construction Management	\$432,000

Appendix G
Cost Estimate Basis for On-Site
Versus Off-Site Disposal Evaluation

Cost Estimate Basis for On-Site Versus Off-Site Disposal Evaluation

In evaluating the cost of on-site versus off-site disposal, cost estimates of sufficient detail are needed to make a comparison between the alternatives. During the development of the Operable Unit 3-13 Feasibility Study Supplement Report (DOE/ID-10619), both the cost of on-site disposal at a new facility and the cost of off-site disposal were estimated. In the Operable Unit 3-13 Record of Decision (DOE/ID-10660), DOE committed to continue to evaluate the cost effectiveness of on-site versus off-site disposal. The ICDF Complex design has been completed and the implementation plan (Remedial Action Work Plan) has been developed. As a result, it is time to complete the estimates for the remaining activities from a life-cycle perspective for the ICDF Complex. In addition, the cost of off-site disposal needs to be re-evaluated.

To accomplish the evaluation of on-site versus off-site disposal, there are three alternatives for which cost estimating on various components were required. These alternatives are ICDF On-Site Disposal, Off-Site Treatment and Disposal, and Off-Site Disposal. In the case of ICDF On-Site Disposal, the project baseline through startup (design, construction, and startup) was previously developed and being implemented. The remaining scope items for operations, closure, and post closure activities were estimated. For both of the Off-Site disposal alternative, the various components of design/build/startup, operations, and closure activities were estimated.

The scope activities for each of the three alternatives are presented below along with the work breakdown structure (WBS) (levels 1 through 3) for the various activities. In addition to the WBS and scope title, the scope of the activity is described along with the estimated cost of the various activities.

ICDF Complex

The scope of this alternative is the design, construction, startup, operations, closure, and post-closure monitoring of the necessary facility to support disposal of INEEL CERCLA waste streams at the ICDF Complex. Under this alternative, all of the waste streams are disposed of at the ICDF Complex with the exception of a small amount that does not meet the ICDF waste acceptance criteria (off-site disposal). Aqueous waste generated during Waste Area Group 3 remedial investigation, well development, and routine groundwater monitoring activities is treated/disposed in the evaporation pond along with leachate from the landfill and other waste generated during operations of the ICDF Complex. Design, construction, and startup costs are the actual expenditures and estimated cost through startup. To develop operation costs, the operations necessary at the ICDF Complex were divided into specific tasks that were evaluated for personnel and other expenses, resulting in the estimated cost for the various tasks. The closure approach for this alternative is capping of the landfill with clean closure (removal of all hazardous/radioactive wastes from the structures/facilities) of the other facilities/structures with a small amount of contaminated materials sent off-site for disposal and the clean waste disposed in the on-site bulk landfill.

1. ICDF Complex Project (Design/Build/Startup) – \$46,852,164

Estimates for all components of the ICDF Complex Project associated with Design, Construction (Build), and Startup were completed for the development of the ICDF Complex Project Execution Plan (DOE-ID, 2002a). The design and construction approach for ICDF landfill and evaporation pond is presented in the ICDF Remedial Design/Construction Work Plan (DOE-ID, 2002b). Also, the design and construction approach for the SSSTF is presented in the SSSTF Remedial Design/Construction Work Plan (DOE-ID 2002c).

2. ICDF Complex Operations – \$2,604,579 per year (w/all components yearly)

2.1. Waste Characterization - \$694,025 per year

2.1.1. Waste Stream QA/QC sampling and analysis - \$347,995 per year

This activity deals with selecting the sampling strategy, collecting samples, analyzing the samples, and reporting the results for both the verification and quality assurance requirements to demonstrate compliance with the ICDF Complex Waste Acceptance Criteria documents. The scope of this activity is for verification and Quality Assurance sampling analysis on 75,000 yds³/year using the sampling requirements specified in the Waste Approval Forms. This includes the onsite analysis for verification along with offsite analysis for quality assurance.

Select QA/QC sampling strategy

Collect QA/QC samples

Analyze QA/QC samples

Report QA/QC sample results

2.1.2. Waste Stream Profile acceptance - \$141,039 per year

This activity deals with the development, review, and approval of the waste profiles (20 waste streams) along with development, review, and approval (modification to the RA WP) of the waste approval forms (WAFs) (5 waste streams)

Waste profile development

Waste profile review/approval

Waste Approval Form (development, review, and approval)

2.1.3. Post-Treatment Sampling and Analysis - \$204,992 per year

This activity deals with the development of the treatment recipe (treatability study for 5 waste streams) and verification/QA sampling (1200 yds³/yr) of the waste following treatment through the soil stabilization process. This includes the onsite analysis for verification along with offsite analysis for quality assurance.

Treatability Study

Collect QA/QC samples

Analyze QA/QC samples

Report QA/QC sample results

2.2. Treatment and Disposal Operations – \$1,046,023 per year

2.2.1. Waste Receipt Operations – \$217,711 per year

This activity deals with the receipt of waste into the ICDF Complex (i.e. paper work, receipt inspection, weighing, and other waste receipt activities) based on receipt of 75,000 yds³/yr

Scheduling and planning (logistics)

Scale readout and maintenance

Waste Receipt

Survey incoming trucks

2.2.2. Staging and Storage Operation - \$13,283 per year

This activity deals with the staging and storage operations (moving in 50 boxes and storing 6,000 gallons of liquid per year) at the ICDF Complex (sufficient capacity available for 1,500 boxes and 12 double contained tanks) but does not including the inspection activities

Store, stage (waste, bulk materials)

Load/unload (vehicles & containers)

2.2.3. Soil Stabilization Treatment Operations - \$165,091 per year

This activity deals with the treatment of 1,200 yds³/yr of waste soils in the soil stabilization treatment unit (i.e. loading the treatment unit, mixing, and unloading into the treated waste staging container) using Portland cement at 400 lbs/yd³ treated

Stabilization

Load/unload vehicles & containers

Receive bulk materials

2.2.4. Debris Treatment by Micro-encapsulation Operations - \$133,727 per year

This activity deals with the treatment of the boxed debris by the micro-encapsulation process for debris treatment at a rate of 1,550 yds³/yr or 330 boxes/yr with the boxes being filled to 75% with waste.

Debris treatment

Load/unload vehicles & containers

2.2.5. Landfill Operations - \$144,561 per year

This activity deals with the disposal of waste (75,000 yds³/yr) into the landfill (i.e. moving waste containers into the landfill, unloading containers, surveying out, spreading the waste, compacting the waste, etc.)

Deliver waste to landfill

Identify grid

Direct truck to active face

Dump waste

Control dust

Move truck out & survey

Spread & compact waste

Handle containers

Apply dust Fixodent

Transfer leachate to evap pond

Instrument control (winter)

2.2.6. Evaporation Pond Operations - \$22,431 per year

This activity deals with the receipt (by truck: 1 per week and from landfill leachate transfers) and management of liquid wastes in the evaporation pond cells

Receive nonleachate by truck

Transfer solids

Transfer decon liquid to pond

Add makeup water

Loading truck (facility)

2.2.7. Decontamination Operations – \$28,716 per year

This activity deals with the decontamination operations (dry decon for 10% and wet decon for 1% of the trucks/equipment)

Decon (equip, tools, parts, facility)

2.2.8. Sizing Operations – \$28,810 per year

This activity deals with the minimal amount of sizing (100 yds³/yr) necessary for disposal in the landfill or packaging for off-site disposal

Sizing

Load/unload vehicles & containers

2.2.9. Packaging for Off-Site Disposal Operations – \$78,791 per year

This activity deals with packaging and off-site disposal (5 yds³/yr of alpha LLW [10 to 100 nCi/g TRU constituents) of waste materials that do not meet the ICDF Waste Acceptance Criteria for disposal

Off-site packaging

Off-site shipping

Load/unload vehicles & containers

2.2.10. Miscellaneous Access and Operational Activities – \$212,903 per year

This activity deals with the day to day operations of the ICDF Complex along with controlling access to the ICDF Complex and other miscellaneous activities necessary for operation of the ICDF Complex

Access Control

Pre-job briefing

Operations Training

Procurement

Store & control spare parts

Dosimetry control

Spill Control

Work control (day to day)

Radio Communications

Emergency Management

Spill kit

2.3. Records Management – \$167,629 per year

2.3.1. Records Management – \$142,990 per year

This activity is the management of the databases and routine records associated with the ICDF Complex operations

- Records management

- IWTS management and maintenance

- Verify waste placement

- Data Tracking, reports

- Track liquid waste to pond (A,B)

2.3.2. Records Storage and Audit Management – \$17,053 per year

This activity is the annual storage of records associated with the ICDF Complex Operations and is support for producing the records during audits

- Store records

- Support ICDF Complex Audits

2.3.3.5 yr Review Support – \$7,587 per year

This activity is the annual maintenance of project record file on the ICDF Complex necessary to support the 5 year reviews under CERCLA

- Maintain project file to support 5 yr reviews

2.4. Surveillance and Monitoring – \$415,633 per year

2.4.1. Perched Water Monitoring – \$76,270 per year

This activity is the monitoring of the perched water in the vicinity of the ICDF Complex including sample collection, analysis, and reporting in accordance with the ICDF Complex groundwater monitoring plan.

- Monitor vadose zone

- Perched groundwater sampling and analysis

2.4.2. SRPA Monitoring – \$29,908 per year

This activity is the monitoring of the SRPA in the vicinity of the ICDF Complex including sample collection, analysis, and reporting in accordance with the ICDF Complex groundwater monitoring plan.

- SRPA groundwater sampling and analysis

2.4.3. Leachate Monitoring – \$13,913 per year

This activity is the monitoring of the ICDF leachate being generated in the landfill for treatment/disposal in the evaporation pond cells (2 times per year) including

sample collection, analysis, and reporting in accordance with the ICDF Complex monitoring plans.

Monitor levels in LCS

Monitor levels in LDS

Leachate sampling and analysis

2.4.4. Institutional Controls – \$8,319 per year

This activity is the implementation of the institutional controls for the ICDF Complex including some limited monitoring for implementation.

Maintain institutional controls/requirements

2.4.5. Container Storage Area Surveillances – \$32,046 per year

This activity is the monitoring of the containers (boxes and other containers for solid materials) at the ICDF Complex (i.e. SSA) encompassing the weekly visual inspection of 1,000 boxes.

Surveillance/Inspection

2.4.6. Tank Storage Area Surveillances – \$66,447 per year

This activity is the monitoring of the storage tanks (tanks with secondary containment) at the ICDF Complex (i.e. SSA) encompassing the daily visual inspection of 8 tanks.

Surveillance/Inspection

2.4.7. Decontamination Facility – \$34,142 per year

This activity is the monitoring of the decontamination facility in the ICDF Complex and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillance/Inspection

Rad testing

Process monitor/operations

2.4.8. Treatment Unit Surveillances – \$30,838 per year

This activity is the monitoring of the treatment unit in the decontamination facility in the ICDF Complex and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillance/Inspection

Rad testing

Process monitor/operations

2.4.9. Landfill Surveillances – \$23,354 per year

This activity is the weekly monitoring of the landfill in the ICDF Complex and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Routine surveillance (berm)

Surveillance/Inspection

2.4.10. Evaporation Pond Surveillances – \$29,175 per year

This activity is the weekly monitoring of the evaporation pond cells in the ICDF Complex and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillances

Leak detection

Evaporation Pond liquid sampling and analysis

Surveillance/Inspection

2.4.11. Administrative Facility and Grounds – \$33,691 per year

This activity is the monitoring of the grounds, utilities, and administrative facility for the ICDF Complex and includes surveillances and monitoring activities along with freeze protection issues.

Surveillances

Process monitoring and operations

Monitor/report freeze protection

2.4.12. Fleet Equipment Surveillances – \$37,531 per year

This activity is the monitoring of the equipment including the heavy equipment used in the landfill disposal operations along with maintaining freeze protection on the equipment.

Freeze protection of equipment

Surveillance/Inspection

2.5. Maintenance – \$155,308 per year

2.5.1. Fencing and Grounds – \$41,537 per year

This activity is maintenance on the utilities, grounds, and roads associated with the ICDF Complex.

Utilities, roads, & grounds

2.5.2. Administrative Facility – \$11,824 per year

This activity is the building maintenance on the administrative facility for the ICDF.

Building maintenance

2.5.3. Equipment – \$29,383 per year

This activity is the preventive and other maintenance on the ICDF Complex equipment including equipment used in the landfill disposal operations.

Equipment (heavy) maintenance

Maintain pit equipment

2.5.4. Soil Stabilization Treatment System – \$15,285 per year

This activity is the preventive and other maintenance on the soils stabilization treatment unit equipment.

Process equipment maintenance

2.5.5. Landfill – \$16,864 per year

This activity is the preventive maintenance on pumps and other equipment necessary for leachate management in the landfill along with maintenance on the berms of the landfill.

Pump maintenance

Landlord maintenance

2.5.6. Evaporation Pond – \$18,887 per year

This activity is the preventive maintenance on instruments and other equipment necessary for leachate management in the evaporation pond along with maintenance on the berms of the evaporation pond and limited liner repairs.

Landlord maintenance

Maintain instruments

Repair liner

2.5.7. Decontamination Facility – \$21,528 per year

This activity is the building maintenance on the decontamination facility including the HVAC system and janitorial services for the ICDF.

Building maint (HVAC, janitorial)

2.6. Reserved – No scope associated with this WBS item

2.7. Reserved – No scope associated with this WBS item

2.8. Reserved – No scope associated with this WBS item

2.9. Reserved – No scope associated with this WBS item

2.10. Program/Project Management – \$125,961 per year

2.10.1. Program Management - \$ 26,430 per year

This activity is the oversight and integration of the ICDF Complex into the Waste Area Group 3 project and consists of 4 hrs of work per week.

Program Management

2.10.2. Project Management – \$99,531 per year

This activity is the specific project management associated with operating the ICDF Complex and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

2.10.3. Construction Management - \$0 per year

There are no construction activities covered in the operations of the ICDF Complex and therefore no construction management required.

3. ICDF Complex Closure - \$13,867,127

The closure of the ICDF Complex will consist of constructing the engineered containment structure (cap) over the ICDF landfill and clean closure (complete removal and disposal) for both the SSSTF structures and ICDF evaporation pond.

3.1. Deactivation and Characterization - \$11,236,967

3.1.1. Deactivate ICDF Complex Structures - \$177,097

This activity involves the shutting down systems, removal of wastes, characterizing the residual contamination, and placing the structures in safe conditions that minimize the future surveillance and maintenance activities.

Decontamination Facility

Soils Stabilization Treatment Unit

Container Storage Areas

Tank Storage Areas

3.1.2. Update/Modify Remedial Design/Construction Work Plan/Remedial Action Work Plans - \$230,310

This activity involves updating/modifying the RD/CWP/RAWP documents for the ICDF and SSSTF under the FFA/CO to deal with the specific closure requirements and technical specification necessary for implementing the final closure activities.

Develop modifications to the RD/CWP/RAWP documents

Submit modifications to EPA and IDEQ

Revise modifications based on EPA and IDEQ comments

Submit finalized revisions to the RD/CWP/RAWP documents

3.1.3.Engineered Barrier Construction - \$8,900,000

This activity involves the procurement of the subcontractor and installation of the engineered barrier (cap) on the ICDF landfill. For this estimate it is assumed that structural soil (250,000 yds³) will be used to contour the top of the landfill beneath the engineered barrier prior to the installation of the various layers and protective berms. However, it should be noted that this volume could potentially be used for the disposal of waste.

Procurement of subcontractor

Structural fill

Compacted Clay

Geomembrane

Lower Type 1 Filter Sand

Lower Type 2 Filter Gravel

Type 3 Armor

Upper Type 2 Filter Gravel

Upper Type 1 Filter Sand

Engineered Structural Fill (water storage component)

Topsoil/Gravel mixture

Vegetation

Type 1 Filter sand for outer edge of cap

Type 2 Filter grave for outer edge of cap

Type 3 Armor for outer edge of cap

Type 1 Armor for outer edge of cap

Place monument markers

3.1.4.D&D of SSSTF - \$1,600,000

This activity involves the procurement of the subcontractor and removal of the SSSTF facilities including disposal of the uncontaminated materials at an onsite landfill. The contaminated materials are set aside for subsequent offsite disposal. Also, following the removal of the structures, characterization activities are conducted to ensure that the residual contamination is below the remedial action objectives established in the OU 3-13 ROD.

Procurement of subcontractor

Removal of the Soils Stabilization Treatment Unit

Removal of the Decontamination Facility

Removal of the Container Storage Areas

Removal of the Tank Storage Areas

Removal of the Administrative Facility

D&D of the Utilities

Post-D&D characterization of the SSSTF areas

3.1.5. Disposal of Waste from D&D Activities - \$329,560

During the D&D of the SSSTF structures an estimated 60 yds³ of mixed low-level debris will be generated and require disposal. This activity involves the packaging, shipment, and disposal of the remaining mixed low-level debris offsite.

Off-Site packaging

Load MLLW debris onto railroad cars

Shipping MLLW debris to offsite commercial disposal facility

Disposal of MLLW debris at the offsite commercial disposal facility

3.2. Evaporation Pond Closure - \$1,000,551

3.2.1. Deactivate ICDF Evaporation Pond - \$30,393

This activity involves the shutting down systems, removal of wastes (liquid and solid/sediments and solidification of the liquid waste. This results in the evaporation pond being placed in a safe condition that minimize the future surveillance and maintenance activities.

Remove liquid from evaporation pond

Remove sludge/sediment from evaporation pond

Solidify aqueous waste

3.2.2. Update/Modify Remedial Design/Construction Work Plan/Remedial Action Work Plans - \$115,131

This activity involves updating/modifying the RD/CWP/RAWP documents for the ICDF evaporation pond under the FFA/CO to deal with the specific closure requirements and technical specification necessary for implementing the final closure activities.

Develop modifications to the RD/CWP/RAWP documents

Submit modifications to EPA and IDEQ

Revise modifications based on EPA and IDEQ comments

Submit finalized revisions to the RD/CWP/RAWP documents

3.2.3.D&D of Evaporation Pond - \$300,000

This activity involves the procurement of the subcontractor and removal of the various materials from the evaporation pond including disposal of the uncontaminated materials at an onsite landfill. The contaminated materials are set aside for subsequent offsite disposal. Also, following the removal of the various evaporation pond, characterization activities are conducted to ensure that the residual contamination is below the remedial action objectives established in the OU 3-13 ROD.

- Procurement of subcontractor

- Removal of the Primary Geomembranes

- Removal of the Primary Geosynthetic Clay Liner

- Removal of the Operations layer materials

- Removal of the Secondary Geomembrane

- Removal of the Secondary Geosynthetic Clay Liner

- Removal of contaminated Base soil

- Removal/closure of transfer pipelines

- Post-D&D characterization the evaporation pond area

3.2.4.Disposal of Waste from D&D Activities - \$555,029

During the D&D of the SSSTF structures an estimated 20 yds³ of mixed low-level debris and 400 yds³ of mixed low-level (LDR) compliant soil will be generated and require disposal. This activity involves the packaging, shipment, and disposal of the remaining mixed low-level debris offsite.

- Off-Site packaging

- Load MLLW debris onto railroad cars

- Shipping MLLW debris to offsite commercial disposal facility

- Disposal of MLLW debris at the offsite commercial disposal facility

- Load MLLW (LDR compliant) soil onto railroad cars

- Shipping MLLW (LDR compliant) soils to offsite commercial disposal facility

- Disposal of MLLW (LDR compliant) soils at the offsite commercial disposal facility

3.3. Records Management - \$74,688

3.3.1.Records Management – \$44,812

This activity is the management of the databases and routine records associated with the ICDF Complex operations

- Records management
- IWTS management and maintenance

- Data Tracking, reports

- Track liquid waste to pond (A,B)

3.3.2.Records Storage and Audit Management – \$14,703

This activity is the annual storage of records associated with the ICDF Complex Operations and is support for producing the records during audits

- Store records
- Support ICDF Complex Audits

3.3.3.5 yr Review Support – \$15,173

This activity is the annual maintenance of project record file on the ICDF Complex necessary to support the 5 year reviews under CERCLA

- Maintain project file to support 5 yr reviews

3.4. Surveillance and Monitoring – \$142,807

3.4.1.Reserved – No scope associated with this WBS item

With the implementation of the OU 3-13 Group 4 Perched Water remedy in effect, the perched water bodies are INTEC will be de-saturated removing the requirement for sampling and analysis activities.

3.4.2.SRPA Monitoring – \$59,816

This activity is the monitoring of the SRPA in the vicinity of the ICDF Complex including sample collection, analysis, and reporting in accordance with the ICDF Complex groundwater monitoring plan.

- SRPA groundwater sampling and analysis

3.4.3.Leachate Monitoring – \$22,639

This activity is the monitoring of the ICDF leachate being generated in the landfill for treatment/disposal in the evaporation pond cells (2 times per year) including sample collection, analysis, and reporting in accordance with the ICDF Complex monitoring plans.

- Monitor levels in LCS
- Monitor levels in LDS

- Leachate sampling and analysis

3.4.4. Institutional Controls – \$16,638

This activity is the implementation of the institutional controls for the ICDF Complex including some limited monitoring for implementation.

Maintain institutional controls/requirements

3.4.5. Reserved – No scope associated with this WBS item

3.4.6. Reserved – No scope associated with this WBS item

3.4.7. Reserved – No scope associated with this WBS item

3.4.8. Reserved – No scope associated with this WBS item

3.4.9. Reserved – No scope associated with this WBS item

3.4.10. Evaporation Pond Surveillances – \$43,714

This activity is the weekly monitoring of the evaporation pond cells in the ICDF Complex and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillances

Leak detection

Evaporation Pond liquid sampling and analysis

Surveillance/Inspection

3.4.11. Reserved – No scope associated with this WBS item

3.4.12. Reserved – No scope associated with this WBS item

3.5. Maintenance – \$51,262

3.5.1. Reserved – No scope associated with this WBS item

3.5.2. Reserved – No scope associated with this WBS item

3.5.3. Reserved – No scope associated with this WBS item

3.5.4. Reserved – No scope associated with this WBS item

3.5.5. Landfill – \$13,488

This activity is the preventive maintenance on pumps and other equipment necessary for leachate.

Pump maintenance

3.5.6. Evaporation Pond – \$37,774

This activity is the preventive maintenance on instruments and other equipment necessary for leachate management in the evaporation pond along with maintenance on the berms of the evaporation pond and limited liner repairs.

Landlord maintenance

Maintain instruments

Repair liner

3.5.7. Reserved – No scope associated with this WBS item

3.6. Reserved – No scope associated with this WBS item

3.7. Reserved – No scope associated with this WBS item

3.8. Reserved – No scope associated with this WBS item

3.9. Reserved – No scope associated with this WBS item

3.10. Program/Project Management – \$1,360,853

3.10.1. Program Management - \$132,150

This activity is the oversight and integration of the ICDF Complex into the Waste Area Group 3 project and consists of 10 hrs of work per week.

Program Management

3.10.2. Project Management – \$578,703

This activity is the specific project management associated with closure of the ICDF Complex and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

3.10.3. Construction Management - \$650,000

This activity is the construction management associated with the construction components of the project.

Construction Management

4. ICDF Complex Post-Closure - \$115,150 per year

4.1. Reserved – No scope associated with this WBS item

4.2. Reserved – No scope associated with this WBS item

4.3. Records Management - \$29,102 per year

4.3.1.Records Management – \$14,164 per year

This activity is the management of the databases and routine records associated with the ICDF Complex operations

Records management

IWTS management and maintenance

Data Tracking, reports

Track liquid waste to pond (A,B)

4.3.2.Records Storage and Audit Management – \$7,351 per year

This activity is the annual storage of records associated with the ICDF Complex Operations and is support for producing the records during audits

Store records

Support ICDF Complex Audits

4.3.3.5 yr Review Support – \$7,587 per year

This activity is the annual maintenance of project record file on the ICDF Complex necessary to support the 5 year reviews under CERCLA

Maintain project file to support 5 yr reviews

4.4. Surveillance and Monitoring – \$38,227 per year

4.4.1.Reserved – No scope associated with this WBS item

With the implementation of the OU 3-13 Group 4 Perched Water remedy in effect, the perched water bodies are INTEC will be de-saturated removing the requirement for sampling and analysis activities.

4.4.2.SRPA Monitoring – \$29,908 per year

This activity is the monitoring of the SRPA in the vicinity of the ICDF Complex including sample collection, analysis, and reporting in accordance with the ICDF Complex groundwater monitoring plan.

SRPA groundwater sampling and analysis

4.4.3.Reserved – No scope associated with this WBS item

4.4.4.Institutional Controls – \$8,319 per year

This activity is the implementation of the institutional controls for the ICDF Complex including some limited monitoring for implementation.

Maintain institutional controls/requirements

4.4.5.Reserved – No scope associated with this WBS item

4.4.6.Reserved – No scope associated with this WBS item

4.4.7.Reserved – No scope associated with this WBS item

4.4.8.Reserved – No scope associated with this WBS item

4.4.9.Reserved – No scope associated with this WBS item

4.4.10. Reserved – No scope associated with this WBS item

4.4.11. Reserved – No scope associated with this WBS item

4.4.12. Reserved – No scope associated with this WBS item

4.5. Maintenance – \$12,696 per year

4.5.1.Reserved – No scope associated with this WBS item

4.5.2.Reserved – No scope associated with this WBS item

4.5.3.Reserved – No scope associated with this WBS item

4.5.4.Reserved – No scope associated with this WBS item

4.5.5.Landfill – \$12,696 year year

This activity is the preventive maintenance on pumps and other equipment necessary for leachate management along with maintenance of the engineered barrier.

Maintenance of the engineered barrier and pump maintenance

4.5.6. Reserved – No scope associated with this WBS item

4.5.7.Reserved – No scope associated with this WBS item

4.6. Reserved – No scope associated with this WBS item

4.7. Reserved – No scope associated with this WBS item

4.8. Reserved – No scope associated with this WBS item

4.9. Reserved – No scope associated with this WBS item

4.10. Program/Project Management – \$35,125 per year

4.10.1. Program Management - \$6,608 per year

This activity is the oversight and integration of the ICDF Complex into the Waste Area Group 3 project and consists of 1 hrs of work per week.

Program Management

4.10.2. Project Management – \$28,518 per year

This activity is the specific project management associated with long-term post-closure care of the ICDF Complex and includes the routine project management (reporting, etc.).

Project Management (routine)

4.10.3. Construction Management - \$0

There are no construction activities covered in the post-closure care of the ICDF Complex and therefore no construction management required.

Off-Site Treatment and Disposal

The scope of this alternative is the design, construction, startup, operations, and closure of the necessary facilities and structures to support shipping the INEEL CERCLA waste streams off-site for treatment and disposal. Under this alternative there is no on-site treatment, but the liquids (aqueous waste generated during remedial investigation, well development, and routine groundwater monitoring activities) are solidified without any attempt to reduce volumes. Design, construction, and startup costs are scaled from the existing cost that have occurred and are expected during the construction and startup activities of the ICDF Complex. Several components for the loadout facility have no comparable component in the ICDF Complex and therefore additional construction estimating was conducted to determine the cost of these components. For the operation activities, the same process that was used for the ICDF Complex is used. The closure approach for this alternative is clean closure (removal of all hazardous/radioactive wastes from the structures/facilities) of the facilities/structures with a small amount of contaminated materials sent off-site for disposal and the clean waste disposed in the on-site bulk landfill.

1. Loadout Facility (Design/Build/Startup) - \$17,931,336

1.1. Reserved – No scope associated with this WBS item

1.2. Loadout Facility Design - \$2,981,793

1.2.1. Loadout Facility Conceptual (10%) Design - \$800,403

This activity is the development of a conceptual design for the Loadout facility. Due to the elimination of treatment for this alternative from the SSSTF Conceptual Design, the estimated cost is 85% (25% of scope dealt with treatment and the addition of 10% scope for dealing with the massive off-site shipping and disposal issues) of the expense to develop the SSSTF Conceptual Design.

1.2.2. Loadout Facility Title I (30%) Design - \$977,111

This activity is the development of a Title I design for the Loadout facility. Due to the elimination of treatment for this alternative from the SSSTF Title I Design, the estimated cost is 60% (50% of scope dealt with treatment and the addition of 10% scope for dealing with the massive off-site shipping and disposal issues) of the expense to develop the SSSTF Title I Design.

1.2.3. Loadout Facility Title II (90%) Design - \$1,204,279

This activity is the development of a Title II design for the Loadout facility. Due to the elimination of treatment for this alternative from the SSSTF Title II Design, the estimated cost is 90% (20% of scope dealt with treatment and there is a on-going design activity for the Title II treatment design and the addition of 10% scope for dealing with the massive off-site shipping and disposal issues) of the expense to develop the SSSTF Title II Design.

1.2.4. Reserved – No scope associated with this WBS item

1.3. Remedial Action Work Plan - \$550,075

1.3.1. Loadout Facility Remedial Action Work Plan - \$550,075

This activity is the development of the Remedial Action Work Plan for operation of the Loadout Facility. Due to the elimination of treatment and the landfill/evaporation pond operations and with the addition of considerable characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 60% (50% of the scope dealt with treatment, landfill, and evaporation pond along with the off-site treatment and disposal issues adding 10% to the scope) of the expense to develop the ICDF Complex Remedial Action Work Plan.

1.4. Loadout Facility Startup - \$1,813,163

1.4.1. Develop Loadout Facility Waste Tracking System - \$220,500

This activity is the development of the waste tracking system for operation of the Loadout Facility. The same level of waste tracking system is required for off-site treatment and disposal as necessary for the ICDF Complex. Therefore, the estimated cost for the Loadout Facility waste tracking system is 100% of the ICDF Complex waste tracking system cost.

1.4.2. Develop Loadout Facility O&M Manual - \$663,426

This activity is the development of the O&M Manual for operation of the Loadout Facility. Due to the elimination of treatment and the landfill/evaporation pond operations and with the addition of considerable characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 50% (60% of the scope dealt with treatment, landfill, and evaporation pond along with the off-site treatment and disposal issues adding 10% to the scope) of the expense to develop the ICDF Complex O&M Manual.

1.4.3. Reserved – No scope associated with this WBS item

1.4.4. Personnel Training - \$71,400

This activity is training the personnel for operation of the Loadout Facility. Due to the elimination of treatment and the landfill/evaporation pond operations and with the addition of considerable characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 60% (50% of the scope dealt with treatment, landfill, and evaporation pond along with the off-site treatment and disposal issues adding 10% to the scope) of the expense to train the personnel for operation of the facilities.

1.4.5. Startup Assessment - \$711,977

This activity is conducting the startup assessment for the Loadout Facility prior to commencing operations. Due to the elimination of treatment and the landfill/evaporation pond operations and with the addition of considerable characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 60% (50% of the scope dealt with treatment, landfill, and evaporation pond along with the off-site treatment and disposal issues adding 10% to the scope) of the expense to conduct the startup assessment. This activity includes both the internal (DOE and INEEL contractor) startup assessment and the EPA/IDEQ prefinal inspection for operations.

1.4.6. Reserved – No scope associated with this WBS item

1.4.7. Loadout Facility Construction Inspections - \$12,240

This activity deals with the EPA and IDEQ prefinal inspection during and at the completion of construction of the Loadout Facility. Due to the elimination of treatment for this alternative from the SSSTF facilities/structures, the estimated cost is 60% (40% of the scope dealt with treatment) of the expense to conduct the prefinal construction inspection on the SSSTF.

1.4.8. Loadout Facility Remedial Action Report - \$133,620

This activity is the development of the Remedial Action Report for operation of the Loadout Facility. Due to the elimination of treatment and the landfill/evaporation pond operations and with the addition of considerable characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 50% (60% of the scope dealt with treatment, landfill, and evaporation pond along with the off-site treatment and disposal issues adding 10% to the scope) of the expense to develop the ICDF Complex Remedial Action Report.

1.5. Reserved – No scope associated with this WBS item

1.6. Loadout Facility Fleet Equipment - \$2,359,800

This activity is the procurement of the equipment necessary to operate the Loadout Facility. An evaluation of the equipment necessary to operate the Loadout Facility resulted the need for a front-end loader, forklift, several trucks, roll-on/roll-off containers with tarps, other miscellaneous operating equipment, mobile analytical laboratory with limited capacity, office equipment, and radiation control monitoring equipment.

1.7. Loadout Facility Construction - \$7,228,690

1.7.1. Site Preparation - \$959,460

This activity is the site preparation activities associated with the construction of the Loadout Facility. The same general facility footprint would be required for the Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Loadout Facility site preparation activity is 100% of the SSSTF site preparation activity cost.

1.7.2. Utilities - \$1,090,254

This activity is the installation (construction) of utilities for the Loadout Facility. The same utilities would be required for the Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Loadout Facility utilities activity is 100% of the SSSTF utilities activity cost.

1.7.3. Administrative Facility - \$249,829

This activity is the construction of the administrative facility for the Loadout Facility. The same type and size of administrative facility would be required for the Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Loadout Facility administrative facility activity is 100% of the SSSTF administrative facility activity cost.

1.7.4. Weigh Scale - \$149,977

This activity is the constructions of the truck weigh scale for the Loadout Facility. The same type and size of scale would be required for the Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Loadout Facility weigh scale activity is 100% of the SSSTF weigh scale activity cost.

1.7.5. Decontamination Facility - \$1,727,644

This activity is the construction of the decontamination facility for the Loadout Facility. The same general facility footprint would be required for the Loadout Facility as required for the SSSTF at the ICDF Complex. Although the soil stabilization treatment equipment is not included under this alternative, that area in the SSSTF decontamination facility will be used for solidification of aqueous wastes and storage under this alternative. Therefore the Loadout Facility decontamination facility activity is 100% of the SSSTF site preparation activity cost.

1.7.6. Concrete Loading/Unloading Pad - \$2,279,526

This activity is the construction of the loading/unloading pad for the Loadout Facility. This concrete pad would measure 350 ft by 100 feet and be constructed of post-tensioned concrete.

1.7.7. New Railroad Spurline into Loadout Facility - \$772,000

There are no railroad spurs that are located in the correct location that could be used for the loadout facility, a new railroad spur would be needed. This activity is the construction of the railroad spur associated with the loadout facility. This railroad spur would be 1.4 miles long and include 3 switches (1 from the main rail line behind INTEC, 2 for the Loadout Facility to switch between the decontamination facility, loadout loading/unloading pad area, and loaded railcar staging area). Empty railroad car would be staged on the railroad rail line behind INTEC.

1.7.8. Reserved – No scope associated with this WBS item

1.7.9. Reserved – No scope associated with this WBS item

1.8. Reserved – No scope associated with this WBS item

1.9. Reserved – No scope associated with this WBS item

1.10. Program/Project Management - \$2,997,815

1.10.1. Program Management - \$474,750

This activity is the management and engineering of the design/construction/startup components of the project at the Waste Area Group (WAG) level. Due to the elimination of treatment and the landfill/evaporation pond from the design/construction/startup activities, the estimated cost is 50% (60% of the scope dealt with treatment, landfill, and evaporation pond and addition of offsite disposal add 10% to the scope) of the ICDF Complex expense to manage the project at the WAG level.

1.10.2. Project Management - \$2,182,029

This activity is the specific management of the design/construction/startup components of the project. Due to the elimination of treatment and the landfill/evaporation pond from the design/construction/startup activities, the estimated cost is 50% (60% of the scope dealt with treatment, landfill, and evaporation pond and addition of offsite disposal add 10% to the scope) of the ICDF Complex expense to manage specific project activities.

1.10.3. Construction Management - \$341,036

This activity is the construction management associated with the construction components of the project. Due to the elimination of treatment and the landfill/evaporation pond from the design/construction/startup activities, the estimated cost is 50% (60% of the scope dealt

with treatment, landfill, and evaporation pond and addition of offsite disposal add 10% to the scope) of the ICDF Complex expense to manage the construction activities.

2. Loadout Facility Operations – \$51,550,070 per year (w/all components yearly)

2.1. Waste Characterization - \$1,851,273 per year

2.1.1. Waste Stream QA/QC sampling and analysis - \$1,710,234 per year

This activity deals with selecting the sampling strategy, collecting samples, analyzing the samples, and reporting the results for both the verification and quality assurance requirements to demonstrate compliance with the Offsite treatment and disposal facility Waste Acceptance Criteria documents. The scope of this activity is for verification and Quality Assurance sampling analysis on 50,000 yds³/year using the sampling requirements specified in the Waste Approval Forms and applicable Waste Acceptance Criteria. This includes the onsite analysis for verification along with offsite analysis for quality assurance.

- Select QA/QC sampling strategy

- Collect QA/QC samples

- Analyze QA/QC samples

- Report QA/QC sample results

2.1.2. Waste Stream Profile acceptance - \$141,039 per year

This activity deals with the development, review, and approval of the waste profiles (20 waste streams) along with development, review, and approval (modification to the RA WP) of the waste approval forms (WAFs) (5 waste streams)

- Waste profile development

- Waste profile review/approval

- Waste Approval Form (development, review, and approval)

2.1.3. Reserved - No scope associated with this WBS item

2.2. Treatment and Disposal Operations – \$49,100,867 per year

2.2.1. Waste Receipt Operations – \$194,283 per year

This activity deals with the receipt of waste into the Loadout Facility (i.e. paper work, receipt inspection, weighing, and other waste receipt activities) based on receipt of 50,000 yds³/yr

Scheduling and planning (logistics)

Scale readout and maintenance

Waste Receipt

Survey incoming trucks

2.2.2. Staging and Storage Operation - \$13,283 per year

This activity deals with the staging and storage operations (moving in 50 boxes and storing 6,000 gallons of liquid per year) at the Loadout Facility (sufficient capacity currently exists at IINTEC (Staging and Storage Annex) available for 1,500 boxes and 12 double contained tanks) but does not including the inspection activities

Store, stage (waste, bulk materials)

Load/unload (vehicles & containers)

2.2.3. Reserved - No scope associated with this WBS item

2.2.4. Reserved - No scope associated with this WBS item

2.2.5. Reserved - No scope associated with this WBS item

2.2.6. Reserved - No scope associated with this WBS item

2.2.7. Decontamination Operations – \$28,716 per year

This activity deals with the decontamination operations (dry decon for 10% and wet decon for 1% of the trucks/equipment delivering the waste to the Loadout Facility)

Decon (equip, tools, parts, facility)

2.2.8. Sizing Operations – \$28,810 per year

This activity deals with the minimal amount of sizing (100 yds³/yr) necessary for packaging/loading for off-site disposal

Sizing

Load/unload vehicles & containers

2.2.9. Packaging for Off-Site Disposal Operations – \$48,622,872 per year

This activity deals with packaging/loading of the waste streams (soils, debris, and solidified aqueous waste) into railroad cars for offsite treatment and disposal. A volume of 49,095 yds³/yr (16,845 yds³/yr LLW soil, 20,376 yds³/yr MLLW LDR compliant soil, 2,191 yds³/yr MLLW requiring treatment, 7,065 yds³/yr LLW debris, 2,616 yds³/yr MLLW debris, and 2 yds³/yr Hazardous debris) would be loaded into/onto railroad cars for disposal at an offsite disposal facility (Envirocare of Utah assumed as disposal facility for estimating purposes). Waste currently contained in boxes at the Staging and Storage Annex would be shipped on flatbed railroad cars and bulk soil and debris received into the Loadout Facility would be shipped in gondola railroad cars. Aqueous waste streams would be solidified using a product like "SP-400 WaterWorks Crystals" to produce a solid material that would be shipped like soil. To eliminate confusion on what waste stream is associated with the particular railroad car, only one waste stream would be shipped per railroad car. This results in approximately 870 railcar shipments per year for a 10 year period. Currently existing contracts are used as the basis for the disposal cost unit rates.

In addition, this activity includes packaging and off-site disposal (5 yds³/yr of alpha LLW [10 to 100 nCi/g TRU constituents) of waste materials that do not meet the offsite commercial disposal facility Waste Acceptance Criteria for disposal at the Nevada Test Site disposal facilities.

Load LLW soil onto railroad cars

Shipping LLW soils to offsite commercial disposal facility

Annual taxes for use of the offsite commercial disposal facility

Disposal of LLW soils at the offsite commercial disposal facility

Load MLLW (LDR compliant) soil onto railroad cars

Shipping MLLW (LDR compliant) soils to offsite commercial disposal facility

Disposal of MLLW (LDR compliant) soils at the offsite commercial disposal facility

Load MLLW (treatment required) soil onto railroad cars

Shipping MLLW (treatment required) soils to offsite commercial disposal facility

Disposal of MLLW (treatment required) soils at the offsite commercial disposal facility

Load LLW debris onto railroad cars

Shipping LLW debris to offsite commercial disposal facility
Disposal of LLW debris at the offsite commercial disposal facility
Load MLLW debris onto railroad cars
Shipping MLLW debris to offsite commercial disposal facility
Disposal of MLLW debris at the offsite commercial disposal facility
Load Hazardous debris onto railroad cars
Shipping Hazardous debris to offsite commercial disposal facility
Disposal of Hazardous debris at the offsite commercial disposal facility
Solidify aqueous waste
Load solidified aqueous waste onto railroad cars
Shipping of solidified aqueous waste to offsite commercial disposal facility
Disposal of solidified aqueous waste at the offsite commercial disposal facility
Load/Unload (vehicles & containers) (alpha LLW)
Off-Site packaging (alpha LLW)
Off-Site shipping & disposal (alpha LLW)

2.2.10. Miscellaneous Access and Operational Activities – \$212,903 per year

This activity deals with the day to day operations of the Loadout Facility along with controlling access to the Loadout Facility and other miscellaneous activities necessary for operation of the Loadout Facility.

Access Control

Pre-job briefing

Operations Training

Procurement

Store & control spare parts

Dosimetry control

Spill Control

Work control (day to day)

Radio Communications

Emergency Management

Spill kit

2.3. Records Management – \$143,475 per year

2.3.1.Records Management – \$118,836 per year

This activity is the management of the databases and routine records associated with the Loadout Facility operations

Records management

IWTS management and maintenance

Data Tracking, reports

2.3.2.Records Storage and Audit Management – \$17,053 per year

This activity is the annual storage of records associated with the Loadout Facility Operations and is support for producing the records during audits

Store records

Support Loadout Facility Audits

2.3.3.5 yr Review Support – \$7,587 per year

This activity is the annual maintenance of project record file on the Loadout Facility necessary to support the 5 year reviews under CERCLA

Maintain project file to support 5 yr reviews

2.4. Surveillance and Monitoring – \$212,176 per year

2.4.1.Reserved – No scope associated with this WBS item

2.4.2.Reserved – No scope associated with this WBS item

2.4.3.Reserved – No scope associated with this WBS item

2.4.4.Institutional Controls – \$8,319 per year

This activity is the implementation of the institutional controls for the Loadout Facility including some limited monitoring for implementation.

 Maintain institutional controls/requirements

2.4.5.Container Storage Area Surveillances – \$32,046 per year

This activity is the monitoring of the containers (boxes and other containers for solid materials) currently existing at INTEC (i.e. SSA) encompassing the weekly visual inspection of 1,000 boxes.

 Surveillance/Inspection

2.4.6.Tank Storage Area Surveillances – \$66,447 per year

This activity is the monitoring of the storage tanks (tanks with secondary containment) currently existing at INTEC (i.e. SSA) encompassing the daily visual inspection of 8 tanks.

 Surveillance/Inspection

2.4.7.Decontamination Facility – \$34,142 per year

This activity is the monitoring of the decontamination facility in the Loadout Facility and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

 Surveillance/Inspection

 Rad testing

 Process monitor/operations

2.4.8.Reserved – No scope associated with this WBS item

2.4.9.Reserved – No scope associated with this WBS item

2.4.10. Reserved – No scope associated with this WBS item

2.4.11. Administrative Facility and Grounds – \$33,691 per year

This activity is the monitoring of the grounds, utilities, and administrative facility for the Loadout Facility and includes surveillances and monitoring activities along with freeze protection issues.

- Surveillances

- Process monitoring and operations

- Monitor/report freeze protection

2.4.12. Fleet Equipment Surveillances – \$37,531 per year

This activity is the monitoring of the equipment including the heavy equipment used Loadout Facility operations along with maintaining freeze protection on the equipment.

- Freeze protection of equipment

- Surveillance/Inspection

2.5. Maintenance – \$89,889 per year

2.5.1.Fencing and Grounds – \$41,537 per year

This activity is maintenance on the utilities, grounds, and roads associated with the Loadout Facility.

- Utilities, roads, & grounds

2.5.2.Administrative Facility – \$11,824 per year

This activity is the building maintenance on the administrative facility for the Loadout Facility.

- Building maintenance

2.5.3.Equipment – \$15,000 per year

This activity is the preventive and other maintenance on the Loadout Facility equipment including equipment used in the landfill disposal operations.

- Equipment (heavy) maintenance

2.5.4.Reserved – No scope associated with this WBS item

2.5.5.Reserved – No scope associated with this WBS item

2.5.6.Reserved – No scope associated with this WBS item

2.5.7.Decontamination Facility – \$21,528 per year

This activity is the building maintenance on the decontamination facility including the HVAC system and janitorial services for the Loadout Facility.

Building maint (HVAC, janitorial)

2.6. Reserved – No scope associated with this WBS item

2.7. Reserved – No scope associated with this WBS item

2.8. Reserved – No scope associated with this WBS item

2.9. Reserved – No scope associated with this WBS item

2.10. Program/Project Management – \$152,391 per year

2.10.1. Program Management - \$ 26,430 per year

This activity is the oversight and integration of the Loadout Facility into the Waste Area Group 3 project and consists of 4 hrs of work per week.

Program Management

2.10.2. Project Management – \$125,961 per year

This activity is the specific project management associated with operating the Loadout Facility and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

2.10.3. Construction Management - \$0 per year

There are no construction activities covered in the operations of the Loadout Facility and therefore no construction management required.

3. Loadout Facility Closure - \$3,925,297

The closure of the Loadout Facility will consist of clean closure (complete removal and disposal) for both the Loadout Facility structures.

3.1. Deactivation and Characterization - \$2,802,156

3.1.1. Deactivate ICDF Complex Structures - \$237,471

This activity involves the shutting down systems, removal of wastes, characterizing the residual contamination, and placing the structures in safe conditions that minimize the future surveillance and maintenance activities.

Decontamination Facility

Loading/Unloading Pad

Container Storage Areas

Tank Storage Areas

3.1.2. Update/Modify Remedial Design/Construction Work Plan/Remedial Action Work Plans - \$230,310

This activity involves updating/modifying the RD/CWP/RAWP documents for the Loadout Facility under the FFA/CO to deal with the specific closure requirements and technical specification necessary for implementing the final closure activities.

- Develop modifications to the RD/CWP/RAWP documents

- Submit modifications to EPA and IDEQ

- Revise modifications based on EPA and IDEQ comments

- Submit finalized revisions to the RD/CWP/RAWP documents

3.1.3.Reserved – No scope associated with this WBS item

3.1.4.D&D of Loadout Facility - \$1,800,000

This activity involves the procurement of the subcontractor and removal of the Loadout facilities including disposal of the uncontaminated materials at an onsite landfill. The contaminated materials are set aside for subsequent offsite disposal. Also, following the removal of the structures, characterization activities are conducted to ensure that the residual contamination is below the remedial action objectives established in the OU 3-13 ROD.

- Procurement of subcontractor

- Removal of the Loading/Unloading Pad

- Removal of the Decontamination Facility

- Removal of the Container Storage Areas

- Removal of the Tank Storage Areas

- Removal of the Administrative Facility

- D&D of the Utilities

- Post-D&D characterization of the Loadout Facility areas

3.1.5.Disposal of Waste from D&D Activities - \$534,376

During the D&D of the Loadout structures an estimated 120 yds³ of mixed low-level debris will be generated and require disposal. This activity involves the packaging, shipment, and disposal of the remaining mixed low-level debris offsite.

- Off-Site packaging

- Load MLLW debris onto railroad cars

Shipping MLLW debris to offsite commercial disposal facility

Disposal of MLLW debris at the offsite commercial disposal facility

3.2. Reserved – No scope associated with this WBS item

3.3. Records Management - \$66,578

3.3.1.Records Management – \$36,702

This activity is the management of the databases and routine records associated with the Loadout Facility operations

Records management

IWTS management and maintenance

Data Tracking, reports

3.3.2.Records Storage and Audit Management – \$14,703

This activity is the annual storage of records associated with the Loadout Facility Operations and is support for producing the records during audits

Store records

Support Loadout Facility Audits

3.3.3.5 yr Review Support – \$15,173

This activity is the annual maintenance of project record file on the Loadout Facility necessary to support the 5 year reviews under CERCLA

Maintain project file to support 5 yr reviews

3.4. Reserved – No scope associated with this WBS item

3.5. Reserved – No scope associated with this WBS item

3.6. Reserved – No scope associated with this WBS item

3.7. Reserved – No scope associated with this WBS item

3.8. Reserved – No scope associated with this WBS item

3.9. Reserved – No scope associated with this WBS item

3.10. Program/Project Management – \$1,056,563

3.10.1. Program Management - \$118,935

This activity is the oversight and integration of the Loadout Facility into the Waste Area Group 3 project and consists of 10 hrs of work per week.

Program Management

3.10.2. Project Management – \$512,628

This activity is the specific project management associated with closure of the Loadout Facility and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

3.10.3. Construction Management - \$425,000

This activity is the construction management associated with the construction components of the project.

Off-Site Disposal

The scope of this alternative is the design, construction, startup, operations, and closure of the necessary facilities to treat the INEEL CERCLA waste onsite and to support shipping the INEEL CERCLA waste streams off-site for disposal. Under this alternative there is on-site treatment for soils, debris, and aqueous waste streams. Design, construction, and startup costs are scaled from the existing cost that have occurred and are expected during the construction and startup activities of the ICDF Complex. Several components for the treatment and loadout facilities have no comparable components in the ICDF Complex and therefore additional construction estimating was conducted to determine the cost of these components. For the operation activities, the same process that was used for the ICDF Complex is used. The closure approach for this alternative is clean closure (removal of all hazardous/radioactive wastes from the structures/facilities) of the facilities/structures with a small amount of contaminated materials sent off-site for disposal and the clean waste disposed in the on-site bulk landfill.

1. Treatment and Loadout Facility (Design/Build/Startup) - \$23,688,389

1.1. Reserved – No scope associated with this WBS item

1.2. Treatment and Loadout Facility Design - \$4,857,510

1.2.1. Treatment and Loadout Facility Conceptual (10%) Design - \$988,734

This activity is the development of a conceptual design for the Treatment and Loadout facility. Due to the addition of an aqueous waste treatment system for this alternative from the SSSTF Conceptual Design, the estimated cost is 105% (addition of 5% scope to deal with aqueous waste treatment) of the expense to develop the SSSTF Conceptual Design.

1.2.2. Treatment and Loadout Facility Title I (30%) Design - \$1,791,370

This activity is the development of a Title I (30%) design for the Treatment and Loadout facility. Due to the addition of an aqueous waste treatment system for this alternative from the SSSTF Title I Design, the estimated cost is 110% (addition of 10% scope to deal with aqueous waste treatment and off-site shipping issues) of the expense to develop the SSSTF Title I Design.

1.2.3. Treatment and Loadout Facility Title II (90%) Design - \$1,471,897

This activity is the development of a Title II (90%) design for the Treatment and Loadout facility. Due to the addition of an aqueous waste treatment system for this alternative from the SSSTF Title II Design, the estimated cost is 110% (addition of 10% scope to deal with aqueous waste treatment system definition and off-site shipping issues) of the expense to develop the SSSTF Title II Design.

1.2.4. Soils Stabilization Treatment Unit Design - \$302,755

This activity is the development of a Title II design for the Soils Stabilization Treatment Unit (SSTU). The same type and size of scale would be required for the SSTU as required

for the SSSTF at the ICDF Complex. Therefore the SSTU for the Treatment and Loadout Facility activity is 100% of the SSSTF SSTU activity cost.

1.2.5.Aqueous Waste Treatment System Design - \$302,755

This activity is the development of a Title II design for the treatment of aqueous waste received into the Treatment and Loadout facility. The treatment unit would consist of a small scale evaporator and the integration of the treatment unit into the Treatment and Loadout Facility infrastructure systems. As the design for the treatment unit would be similar to the SSSTF SSTU design (off the shelf treatment unit with the design mainly dealing with the connections to the infrastructure and loading/unloading issues), the cost of the design would be the same as for the SSSTF SSTU design.

1.3.Remedial Action Work Plan - \$733,434

1.3.1.Treatment and Loadout Facility Remedial Action Work Plan - \$733,434

This activity is the development of the Remedial Action Work Plan for operation of the Treatment and Loadout Facility. Due to the elimination of the landfill/evaporation pond operations and with the addition of considerable treatment, characterization, packaging, and shipping for off-site disposal issues, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the off-site disposal and aqueous waste treatment issues adding 20% to the scope) of the expense to develop the ICDF Complex Remedial Action Work Plan.

1.4.Treatment and Loadout Facility Startup - \$2,556,597

1.4.1.Develop Treatment and Loadout Facility Waste Tracking System - \$220,500

This activity is the development of the waste tracking system for operation of the Treatment and Loadout Facility. The same level of waste tracking system is required for off-site treatment and disposal as necessary for the ICDF Complex. Therefore, the estimated cost for the Treatment and Loadout Facility waste tracking system is 100% of the ICDF Complex waste tracking system cost.

1.4.2.Develop Treatment and Loadout Facility O&M Manual - \$1,061,482

This activity is the development of the O&M Manual for operation of the Treatment and Loadout Facility. Due to the elimination of the landfill and evaporation pond operations and with the addition of considerable aqueous waste treatment, characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the aqueous waste treatment and off-site disposal issues adding 20% to the scope) of the expense to develop the ICDF Complex O&M Manual.

1.4.3.Reserved – No scope associated with this WBS item

1.4.4.Personnel Training - \$95,200

This activity is training the personnel for operation of the Treatment and Loadout Facility. Due to the elimination of the landfill and evaporation pond operations and with the addition of considerable aqueous waste treatment, characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the aqueous waste treatment and off-site disposal issues adding 20% to the scope) of the expense to train the personnel for operation of the facilities.

1.4.5.Startup Assessment - \$949,303

This activity is conducting the startup assessment for the Treatment and Loadout Facility prior to commencing operations. Due to the elimination of the landfill and evaporation pond operations and with the addition of considerable aqueous waste treatment, characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the aqueous waste treatment and off-site disposal issues adding 20% to the scope) of the expense to conduct the startup assessment. This activity includes both the internal (DOE and INEEL contractor) startup assessment and the EPA/IDEQ prefinal inspection for operations.

1.4.6.Reserved – No scope associated with this WBS item

1.4.7.Loadout Facility Construction Inspections - \$16,320

This activity deals with the EPA and IDEQ prefinal inspection during and at the completion of construction of the Treatment and Loadout Facility. Due to the elimination of the landfill and evaporation pond operations and with the addition of considerable aqueous waste treatment, characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the aqueous waste treatment and off-site disposal issues adding 20% to the scope) of the expense to conduct the prefinal construction inspection on the SSSTF.

1.4.8.Loadout Facility Remedial Action Report - \$213,792

This activity is the development of the Remedial Action Report for operation of the Treatment and Loadout Facility. Due to the elimination of the landfill and evaporation pond operations and with the addition of considerable aqueous waste treatment, characterization, packaging, and shipping for off-site treatment and disposal, the estimated cost is 80% (40% of the scope dealt with landfill and evaporation pond along with the aqueous waste treatment and off-site disposal issues adding 20% to the scope) of the expense to develop the ICDF Complex Remedial Action Report.

1.5. Reserved – No scope associated with this WBS item

1.6. Treatment and Loadout Facility Fleet Equipment - \$2,374,882

This activity is the procurement of the equipment necessary to operate the Treatment and Loadout Facility. An evaluation of the equipment necessary to operate the Treatment and Loadout Facility resulted the need for a front-end loader, forklift, several trucks, roll-on/roll-off containers with tarps, other miscellaneous operating equipment, mobile analytical laboratory with limited capacity, office equipment, and radiation control monitoring equipment.

1.7. Loadout Facility Construction - \$8,369,463

1.7.1.Site Preparation - \$959,460

This activity is the site preparation activities associated with the construction of the Treatment and Loadout Facility. The same general facility footprint would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Treatment and Loadout Facility site preparation activity is 100% of the SSSTF site preparation activity cost.

1.7.2. Utilities - \$1,090,254

This activity is the installation (construction) of utilities for the Treatment and Loadout Facility. The same utilities would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Treatment and Loadout Facility utilities activity is 100% of the SSSTF utilities activity cost.

1.7.3. Administrative Facility - \$249,829

This activity is the construction of the administrative facility for the Treatment and Loadout Facility. The same type and size of administrative facility would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Treatment and Loadout Facility administrative facility activity is 100% of the SSSTF administrative facility activity cost.

1.7.4. Weigh Scale - \$149,977

This activity is the constructions of the truck weigh scale for the Treatment and Loadout Facility. The same type and size of scale would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Treatment and Loadout Facility weigh scale activity is 100% of the SSSTF weigh scale activity cost.

1.7.5. Decontamination Facility - \$1,727,644

This activity is the construction of the decontamination facility for the Treatment and Loadout Facility. The same general facility footprint would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. Therefore the Treatment and Loadout Facility decontamination facility activity is 100% of the SSSTF site preparation activity cost.

1.7.6. Concrete Loading/Unloading Pad - \$2,279,526

This activity is the construction of the loading/unloading pad for the Loadout Facility. This concrete pad would measure 350 ft by 100 feet and be constructed of post-tensioned concrete.

1.7.7. New Railroad Spurline into Loadout Facility - \$772,000

There are no railroad spurs that are located in the correct location that could be used for the loadout facility, a new railroad spur would be needed. This activity is the construction of the railroad spur associated with the loadout facility. This railroad spur would be 1.4 miles long and include 3 switches (1 from the main rail line behind INTEC, 2 for the Loadout Facility to switch between the decontamination facility, loadout loading/unloading pad area, and loaded railcar staging area). Empty railroad car would be staged on the railroad rail line behind INTEC.

1.7.8. Soils Stabilization Treatment Unit – \$1,003,773

This activity is the construction and installation of soils stabilization treatment unit for the Treatment and Loadout Facility. The same treatment unit would be required for the Treatment and Loadout Facility as required for the SSSTF at the ICDF Complex. However, there is sufficient throughput capacity for the mixing unit to increase the treatment rate to 20 yds³/day. Therefore the Treatment and Loadout Facility utilities activity is 100% of the SSSTF soils stabilization treatment unit activity cost.

1.7.9. Debris Waste Treatment Equipment – \$12,000

This activity is the construction and installation of the debris treatment equipment. This equipment would consist of 3 steel forms (4ft x 4ft x 8ft) with fold down sides that debris

can be placed into the form. Allowing for grout to be placed on top of the debris, which would then cover the debris and result is a solid block.

1.7.10. Aqueous Waste Treatment Unit – \$125,000

This activity is the construction and installation of an electrically heated evaporator with a 25 gallons per hour throughput. In addition, the necessary piping, pumps, and tanks are part of this aqueous waste treatment unit. This evaporator would also be installed in the treatment area within the decontamination building.

1.8. Reserved – No scope associated with this WBS item

1.9. Reserved – No scope associated with this WBS item

1.10. Program/Project Management - \$4,796,503

1.10.1. Program Management - \$759,600

This activity is the management and engineering of the design/construction/startup components of the project at the Waste Area Group (WAG) level. Due to the elimination of the landfill and evaporation pond from the design/construction/startup activities, the estimated cost is 80% (50% of the scope dealt with landfill and evaporation pond and the addition of aqueous waste treatment and off-site shipping/disposal increases the scope by 30%) of the ICDF Complex expense to manage the project at the WAG level.

1.10.2. Project Management - \$3,491,246

This activity is the specific management of the design/construction/startup components of the project. Due to the elimination of the landfill and evaporation pond from the design/construction/startup activities, the estimated cost is 80% (50% of the scope dealt with landfill and evaporation pond and the addition of aqueous waste treatment and off-site shipping/disposal increases the scope by 30%) of the ICDF Complex expense to manage specific project activities.

1.10.3. Construction Management - \$545,657

This activity is the construction management associated with the construction components of the project. Due to the elimination of the landfill and evaporation pond from the design/construction/startup activities, the estimated cost is 80% (50% of the scope dealt with landfill and evaporation pond and the addition of aqueous waste treatment and off-site shipping/disposal increases the scope by 30%) of the ICDF Complex expense to manage the construction activities.

2. Treatment and Loadout Facility Operations – \$16,240,449 per year

2.1. Waste Characterization - \$2,915,309 per year

2.1.1. Waste Stream QA/QC sampling and analysis - \$1,710,234 per year

This activity deals with selecting the sampling strategy, collecting samples, analyzing the samples, and reporting the results for both the verification and quality assurance requirements to demonstrate compliance with the Offsite treatment and disposal facility Waste Acceptance Criteria documents. The scope of this activity is for verification and Quality Assurance sampling analysis on 50,000 yds³/year using the sampling requirements specified in the Waste Approval Forms and applicable Waste Acceptance Criteria. This includes the onsite analysis for verification along with offsite analysis for quality assurance.

- Select QA/QC sampling strategy

- Collect QA/QC samples

- Analyze QA/QC samples

- Report QA/QC sample results

2.1.2. Waste Stream Profile acceptance - \$141,039 per year

This activity deals with the development, review, and approval of the waste profiles (20 waste streams) along with development, review, and approval (modification to the RA WP) of the waste approval forms (WAFs) (5 waste streams)

- Waste profile development

- Waste profile review/approval

- Waste Approval Form (development, review, and approval)

2.1.3. Post-Treatment Sampling and Analysis (soils/aqueous waste) - \$422,175 per year

This activity deals with the development of the treatment recipe (treatability study for 5 waste streams) and verification/QA sampling (2,190 yds³/yr) of the waste following treatment through the soil stabilization process. This includes the onsite analysis for verification along with offsite analysis for quality assurance. In addition, the necessary documentation (5 waste streams) would be developed to support that this waste should not be considered listed waste any longer allowing for disposal as LLW soils.

- Treatability Study

- Develop No-Longer-Contained-In documentation for treated soils and aqueous wastess

- Collect QA/QC samples

- Analyze QA/QC samples

- Report QA/QC sample results

2.1.4. Post-Treatment Shipping Container Analysis (debris) - \$641,861 per year

This activity deals with the development of the treatment recipe/process refinements (treatability study for 5 waste streams) and analysis/inspection/certification of treated debris

wastes made into 4 ft by 4 ft by 8 ft blocks of grouted waste (2,616 yds³/yr prior to treatment or 3,488 yds³/yr following treatment) as suitable for offsite disposal and acceptable as shipping containers following the treatment process. In addition, the necessary documentation (5 waste streams) would be developed to support that this waste should not be considered listed waste any longer allowing for disposal as LLW debris.

Treatability Study

Develop No-Longer-Contained-In documentation for treated debris

Analyze treated debris shipping container

Report treated debris shipping container results

2.2. Treatment and Disposal Operations – \$12,547,155 per year

2.2.1. Waste Receipt Operations – \$194,283 per year

This activity deals with the receipt of waste into the Treatment and Loadout Facility (i.e. paper work, receipt inspection, weighing, and other waste receipt activities) based on receipt of 50,000 yds³/yr

Scheduling and planning (logistics)

Scale readout and maintenance

Waste Receipt

Survey incoming trucks

2.2.2. Staging and Storage Operation - \$13,283 per year

This activity deals with the staging and storage operations (moving in 50 boxes and storing 6,000 gallons of liquid per year) at the Treatment and Loadout Facility (sufficient capacity currently exists at IINTEC (Staging and Storage Annex) available for 1,500 boxes and 12 double contained tanks) but does not including the inspection activities

Store, stage (waste, bulk materials)

Load/unload (vehicles & containers)

2.2.3. Soil Stabilization Treatment Operations - \$325,472 per year

This activity deals with the treatment of 2,191 yds³/yr of waste soils in the soil stabilization treatment unit (i.e. loading the treatment unit, mixing, and unloading into the treated waste staging container) using Portland cement at 400 lbs/yd³ treated

Stabilization

Load/unload vehicles & containers

Receive bulk materials

2.2.4. Debris Treatment by Micro-encapsulation Operations - \$440,856 per year

This activity deals with the treatment of the boxed and bulk debris by the micro-encapsulation process for debris treatment at a rate of 2,618 yds³/yr (prior to treatment 3,273 yds³/yr following treatment – boxes or forms are at 75% of capacity prior to grout addition). The debris currently in boxes or other containers would be microencapsulated in the box/container. The bulk debris waste would be placed into concrete forms and grouted into a solid mass. Following the grouting operations the boxes/containers/grouted mass would be inspected and prepared for shipment to an offsite commercial disposal facility (Envirocare of Utah used for cost estimating purposes).

- Debris treatment

- Load/unload vehicles & containers

2.2.5. Reserved - No scope associated with this WBS item

2.2.6. Aqueous Waste Treatment Unit Operations - \$117,238 per year

This activity involves operating and treating 30,000 gallons per year of aqueous waste using the treatment unit consisting of a small scale evaporator. In addition, waste would be received into this treatment unit, transferred out of the treatment unit, and necessary decontamination conducted as part of routine operations.

- Receive aqueous waste by truck

- Operate aqueous waste evaporator

- Transfer concentrated aqueous waste to soil stabilization treatment unit

- Routine evaporator decontamination

2.2.7. Decontamination Operations – \$28,716 per year

This activity deals with the decontamination operations (dry decon for 10% and wet decon for 1% of the trucks/equipment delivering the waste to the Treatment and Loadout Facility)

- Decon (equip, tools, parts, facility)

2.2.8. Sizing Operations – \$28,810 per year

This activity deals with the minimal amount of sizing (100 yds³/yr) necessary for disposal in the landfill or packaging for off-site disposal

Sizing

Load/unload vehicles & containers

2.2.9. Packaging for Off-Site Disposal Operations – \$11,185,594 per year

This activity deals with packaging/loading of the waste streams (soils, debris, and treated aqueous waste) into railroad cars for offsite treatment and disposal. A volume of 50,535 yds³/yr following treatment (16,845 yds³/yr LLW soil, 20,376 yds³/yr MLLW LDR compliant soil, 2,739 yds³/yr treated MLLW soil, 7,065 yds³/yr LLW debris, 3,488 yds³/yr MLLW debris, and 3 yds³/yr Hazardous debris) would be loaded into/onto railroad cars for disposal at an offsite disposal facility (Envirocare of Utah assumed as disposal facility for estimating purposes). A of the MLLW soil non-LDR compliant waste would be treated along with the MLLW debris and Hazardous debris. Using the no-longer contained-in documentation discussed in 2.1.3 and 2.1.4, the waste would be disposed of as LLW (LLW soil and LLW debris. The residuals from the aqueous waste treatment unit would have be solidified in the soils stabilization treatment unit and disposed of as LLW soil. To eliminate confusion on what waste stream is associated with the particular railroad car, only one waste stream would be shipped per railroad car. This results in approximately 896 railcar shipments per year for a 10 year period. Currently existing contracts are used as the basis for the disposal cost unit rates.

In addition, this activity includes packaging and off-site disposal (5 yds³/yr of alpha LLW [10 to 100 nCi/g TRU constituents) of waste materials that do not meet the offsite commercial disposal facility Waste Acceptance Criteria for disposal at the Nevada Test Site disposal facilities.

Load LLW soil (LLW soils include MLLW soil that no-longer has listed waste or characteristic waste issues) onto railroad cars

Shipping LLW soils to offsite commercial disposal facility

Annual taxes for use of the offsite commercial disposal facility

Disposal of LLW soils at the offsite commercial disposal facility

Load LLW debris (LLW debris include MLLW and Hazardous debris that no-longer has listed waste or characteristic waste issues) onto railroad cars

Shipping LLW debris to offsite commercial disposal facility

Disposal of LLW debris at the offsite commercial disposal facility

Load/Unload (vehicles & containers) (alpha LLW)

Off-Site packaging (alpha LLW)

Off-Site shipping & disposal (alpha LLW)

2.2.10. Miscellaneous Access and Operational Activities – \$212,903 per year

This activity deals with the day to day operations of the Treatment and Loadout Facility along with controlling access to Treatment and Loadout Facility and other miscellaneous activities necessary for operation of the Treatment and Loadout Facility.

Access Control

Pre-job briefing

Operations Training

Procurement

Store & control spare parts

Dosimetry control

Spill Control

Work control (day to day)

Radio Communications

Emergency Management

Spill kit

2.3. Records Management – \$149,494 per year

2.3.1. Records Management – \$124,855 per year

This activity is the management of the databases and routine records associated with the Treatment and Loadout Facility operations

Records management

IWTS management and maintenance

Data Tracking, reports

Track liquid waste to evaporator

2.3.2. Records Storage and Audit Management – \$17,053 per year

This activity is the annual storage of records associated with the Treatment and Loadout Facility Operations and is support for producing the records during audits

Store records

Support ICDF Complex Audits

2.3.3.5 yr Review Support – \$7,587 per year

This activity is the annual maintenance of project record file on the Treatment and Loadout Facility necessary to support the 5 year reviews under CERCLA

Maintain project file to support 5 yr reviews

2.4. Surveillance and Monitoring – \$273,851 per year

2.4.1.Reserved - No scope associated with this WBS item

2.4.2.Reserved - No scope associated with this WBS item

2.4.3.Reserved - No scope associated with this WBS item

2.4.4.Institutional Controls – \$8,319 per year

This activity is the implementation of the institutional controls for the Treatment and Loadout Facility including some limited monitoring for implementation.

Maintain institutional controls/requirements

2.4.5.Container Storage Area Surveillances – \$32,046 per year

This activity is the monitoring of the containers (boxes and other containers for solid materials) currently existing at INTEC (i.e. SSA) encompassing the weekly visual inspection of 1,000 boxes.

Surveillance/Inspection

2.4.6.Tank Storage Area Surveillances – \$66,447 per year

This activity is the monitoring of the storage tanks (tanks with secondary containment) currently existing at INTEC (i.e. SSA) encompassing the daily visual inspection of 8 tanks.

Surveillance/Inspection

2.4.7. Decontamination Facility – \$34,142 per year

This activity is the monitoring of the decontamination facility in the Treatment and Loadout Facility and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillance/Inspection

Rad testing

Process monitor/operations

2.4.8. Treatment Unit Surveillances – \$30,838 per year

This activity is the monitoring of the treatment unit in the decontamination facility in the Treatment and Loadout Facility and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillance/Inspection

Rad testing

Process monitor/operations

2.4.9. Reserved - No scope associated with this WBS item

2.4.10. Aqueous Waste Treatment Unit Surveillances – \$30,838 per year

This activity is the weekly monitoring of the evaporator treatment unit in the Treatment and Loadout Facility and includes period radiation surveying (testing) along with other surveillances and monitoring activities.

Surveillances

Leak detection

Evaporation Pond liquid sampling and analysis

Surveillance/Inspection

2.4.11. Administrative Facility and Grounds – \$33,691 per year

This activity is the monitoring of the grounds, utilities, and administrative facility for the Treatment and Loadout Facility and includes surveillances and monitoring activities along with freeze protection issues.

Surveillances

Process monitoring and operations

Monitor/report freeze protection

2.4.12. Fleet Equipment Surveillances – \$37,531 per year

This activity is the monitoring of the equipment including the heavy equipment used in the Treatment and Loadout Facility operations along with maintaining freeze protection on the equipment.

Freeze protection of equipment

Surveillance/Inspection

2.5. Maintenance – \$122,959 per year

2.5.1.Fencing and Grounds – \$41,537 per year

This activity is maintenance on the utilities, grounds, and roads associated with the Treatment and Loadout Facility.

Utilities, roads, & grounds

2.5.2.Administrative Facility – \$11,824 per year

This activity is the building maintenance on the administrative facility for the Treatment and Loadout Facility.

Building maintenance

2.5.3.Equipment – \$15,000 per year

This activity is the preventive and other maintenance on the Treatment and Loadout Facility equipment including equipment used in the landfill disposal operations.

Equipment (heavy) maintenance

2.5.4. Soil Stabilization Treatment System – \$15,285 per year

This activity is the preventive and other maintenance on the soils stabilization treatment unit equipment.

Process equipment maintenance

2.5.5. Reserved – No scope associated with this WBS item

2.5.6. Aqueous Waste Treatment Unit – \$17,785 per year

This activity is the preventive maintenance on instruments and other equipment necessary for proper operation of the aqueous waste treatment system.

Process equipment maintenance

2.5.7. Decontamination Facility – \$21,528 per year

This activity is the building maintenance on the decontamination facility including the HVAC system and janitorial services for the Treatment and Loadout Facility.

Building maint (HVAC, janitorial)

2.6. Reserved – No scope associated with this WBS item

2.7. Reserved – No scope associated with this WBS item

2.8. Reserved – No scope associated with this WBS item

2.9. Reserved – No scope associated with this WBS item

2.10. Program/Project Management – \$231,681 per year

2.10.1. Program Management - \$ 26,430 per year

This activity is the oversight and integration of the ICDF Treatment and Loadout Facility into the Waste Area Group 3 project and consists of 4 hrs of work per week.

Program Management

2.10.2. Project Management – \$205,251 per year

This activity is the specific project management associated with operating the Treatment and Loadout Facility and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

2.10.3. Construction Management - \$0 per year

There are no construction activities covered in the operations of the Treatment and Loadout Facility and therefore no construction management required.

3. Treatment and Loadout Facility Closure - \$4,183,261

The closure of the Treatment and Loadout Facility will consist of clean closure (complete removal and disposal) for both the Treatment and Loadout Facility structures.

3.1. Deactivation and Characterization - \$3,060,121

3.1.1. Deactivate ICDF Complex Structures - \$295,435

This activity involves the shutting down systems, removal of wastes, characterizing the residual contamination, and placing the structures in safe conditions that minimize the future surveillance and maintenance activities.

Decontamination Facility

Loading/Unloading Pad

Soils Stabilization Treatment Unit

Aqueous Waste Treatment Equipment

Container Storage Areas

Tank Storage Areas

3.1.2. Update/Modify Remedial Design/Construction Work Plan/Remedial Action Work Plans - \$230,310

This activity involves updating/modifying the RD/CWP/RAWP documents for the Treatment and Loadout Facility under the FFA/CO to deal with the specific closure requirements and technical specification necessary for implementing the final closure activities.

- Develop modifications to the RD/CWP/RAWP documents

- Submit modifications to EPA and IDEQ

- Revise modifications based on EPA and IDEQ comments

- Submit finalized revisions to the RD/CWP/RAWP documents

3.1.3. Reserved – No scope associated with this WBS item

3.1.4. D&D of Treatment and Loadout Facility - \$2,000,000

This activity involves the procurement of the subcontractor and removal of the Loadout facilities including disposal of the uncontaminated materials at an onsite landfill. The contaminated materials are set aside for subsequent offsite disposal. Also, following the removal of the structures, characterization activities are conducted to ensure that the residual contamination is below the remedial action objectives established in the OU 3-13 ROD.

- Procurement of subcontractor

- Removal of the Loading/Unloading Pad

- Removal of Soils Stabilization Treatment Unit

- Removal of Aqueous Waste Treatment Equipment

- Removal of the Decontamination Facility

- Removal of the Container Storage Areas

- Removal of the Tank Storage Areas

- Removal of the Administrative Facility

- D&D of the Utilities

- Post-D&D characterization of the Loadout Facility areas

3.1.5. Disposal of Waste from D&D Activities - \$534,376

During the D&D of the Treatment and Loadout structures an estimated 120 yds³ of mixed low-level debris will be generated and require disposal. This activity involves the packaging, shipment, and disposal of the remaining mixed low-level debris offsite.

- Off-Site packaging

- Load MLLW debris onto railroad cars

- Shipping MLLW debris to offsite commercial disposal facility

- Disposal of MLLW debris at the offsite commercial disposal facility

3.2. Reserved – No scope associated with this WBS item

3.3. Records Management - \$66,578

3.3.1. Records Management – \$36,702

This activity is the management of the databases and routine records associated with the Treatment and Loadout Facility operations

- Records management

- IWTS management and maintenance

- Data Tracking, reports

3.3.2. Records Storage and Audit Management – \$14,703

This activity is the annual storage of records associated with the Treatment and Loadout Facility Operations and is support for producing the records during audits

- Store records

- Support Treatment and Loadout Facility Audits

3.3.3.5 yr Review Support – \$15,173

This activity is the annual maintenance of project record file on the Treatment and Loadout Facility necessary to support the 5 year reviews under CERCLA

- Maintain project file to support 5 yr reviews

3.4. Reserved – No scope associated with this WBS item

3.5. Reserved – No scope associated with this WBS item

3.6. Reserved – No scope associated with this WBS item

3.7. Reserved – No scope associated with this WBS item

3.8. Reserved – No scope associated with this WBS item

3.9. Reserved – No scope associated with this WBS item

3.10. Program/Project Management – \$1,056,563

3.10.1. Program Management - \$118,935

This activity is the oversight and integration of the Loadout Facility into the Waste Area Group 3 project and consists of 10 hrs of work per week.

Program Management

3.10.2. Project Management – \$512,628

This activity is the specific project management associated with closure of the Loadout Facility and includes the routine project management (reporting, etc.) along with specific personnel management issues.

Personnel Management

Project Management (routine)

3.10.3. Construction Management - \$425,000

This activity is the construction management associated with the construction components of the project.

REFERENCES

DOE-ID, 2002a, *Project Execution Plan for the INEEL CERCLA Disposal Facility Complex*, DOE/ID-10987, Revision 0, U.S. Department of Energy Idaho Operations Office, May 2002.

DOE-ID, 2002b, *INEEL CERCLA Disposal Facility Remedial Design/Construction Work Plan*, DOE/ID-10848, Revision 1, U.S. Department of Energy Idaho Operations Office, May 2002

DOE-ID, 2002c, *Remedial Design/Construction Work Plan for the Waste Area Group 3 Staging, Storage, Sizing, and Treatment Facility*, DOE/ID-10889, Revision 0, U.S. Department of Energy Idaho Operations Office, March 2002.